

# Access 2007: Part I

Stephen Moffat, The Mouse Training Company

 Microsoft®  
Office 2007

# Access Part I



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Part I



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# Section 1 Introduction

## 1.1 How To Use This Guide

This manual should be used as a point of reference following attendance of the introductory level Access 2007 training course. It covers all the topics taught and aims to act as a support aid for any tasks carried out by the user after the course.

The manual is divided into sections, each section covering an aspect of the introductory course. The table of contents lists the page numbers of each section and the table of figures indicates the pages containing tables and diagrams.

## 1.2 Instructions

Those who have already used a Database before may not need to read explanations on what each command does, but would rather skip straight to the instructions to find out how to do it. Look out for the arrow icon which precedes a list of instructions.

### **Keyboard**

Keys are referred to throughout the manual in the following way:

ENTER – Denotes the return or enter key, DELETE – denotes the Delete key and so on. Where a command requires two keys to be pressed, the manual displays this as CTRL P – this means press the letter “p” while holding down the Control key.

### **Commands**

When a command is referred to in the manual, the following distinctions have been made:

When Ribbon commands are referred to, the manual will refer you to the Ribbon – E.g. “Choose home from the Ribbons and then B for bold”.

When dialog box options are referred to, the following style has been used for the text – “In the Page Range section of the Print dialog, click the Current Page option”

Dialog box buttons are shaded and boxed – “Click OK to close the Print dialog and launch the print.” Within each section, any items that need further explanation or extra attention devoted to them are denoted by shading. E.G.:

# Section 2 The Basics

By the end of this section you will be able to identify

- Title Bar
- Ribbons
- The Access window
- Ask a Question

## The Access Screen

**Window Border** The box that surrounds the Access screen when it is not maximised is called the window border. When the mouse is over the border, the pointer changes from a single to a double-headed arrow – clicking and dragging with this shape allows the window to be resized.

**Title bar** The coloured bar that appears at the top of the Access window. The title bar tells you which application you are using and if the workbook you are in is maximised, it will also contain the name of the workbook. If the Access window is not maximised, by positioning the mouse over the title bar and clicking and dragging, you can move the Access window to a new location on the screen.



**Maximise button** When working in a workbook, the Access screen contains two windows, an application window and a workbook window. You can maximise both windows to capitalise on the space you have on-screen. If you would like the window that your Access application is in to fill up the whole screen, click the outermost maximise button. You may find that the workbook you are in can still be bigger – click the inner maximise button to fill the remaining space within the Access application window.



**Minimise button** This button is very useful if you need to temporarily switch from Access into another application without closing Access down completely. Click the minimise button to shrink Access to an icon on the task bar; you will then be able to view other icons and applications you may wish to access. When you are finished and ready to continue, click the Access icon from the task bar to resume. The innermost minimise button will minimise the current workbook window.



**Restore button** This button only appears when a window is maximised. A maximised window has no border and you cannot see what is behind it. If you want to put the window back inside its border so that you can move and size it, click the restore button.



**Close button** This button is used to close a window. If you click the close button for a workbook window you close the document. The last button will close the Access application.

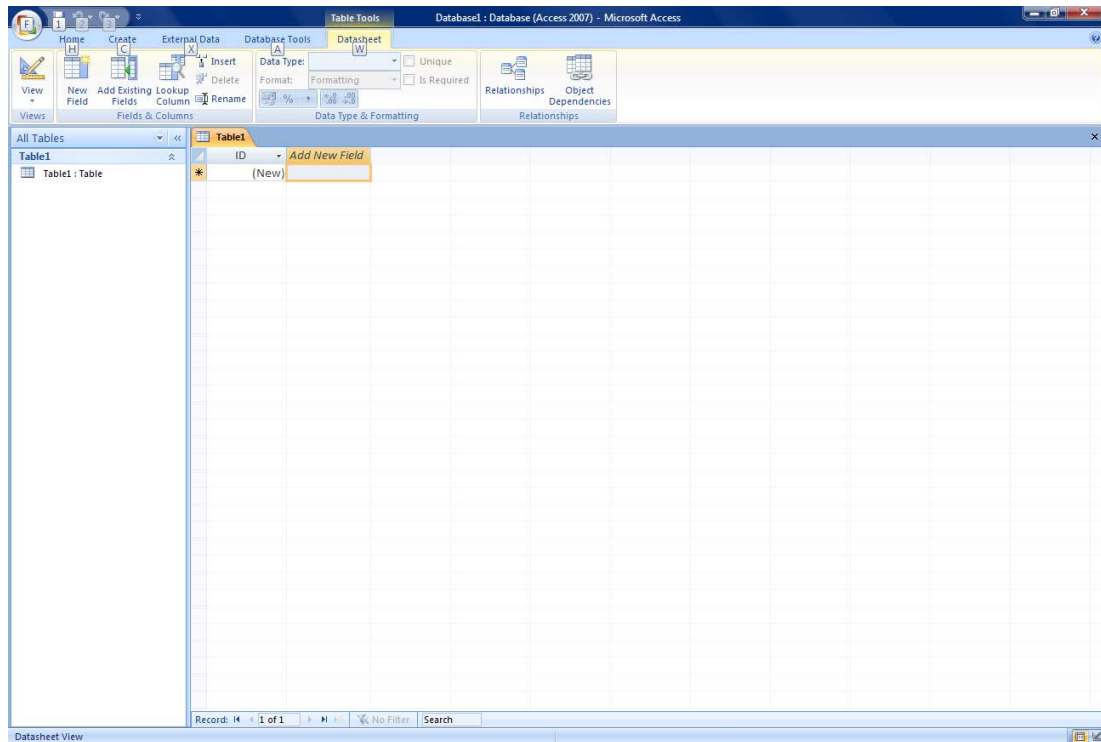


**Dialog Box Launcher** this button launches dialog boxes specific to the part of the ribbon you see them the category will be named such as font, clipboard, etc



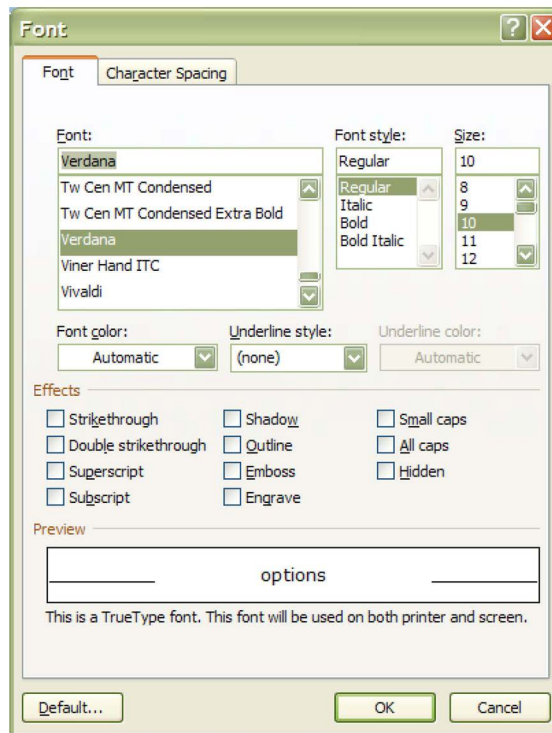
The office button is the start of Access and has many important commands and option. Such as Access settings, opening, saving, printing and closing files. This will be looked into much further later in the manual.

Access 2007 appears as displayed below when a new database is created.. There is a pane on the left to help all objects created within access and on the right the main work window to edit and create those objects such as tables and forms etc.



► To Activate a Button on the ribbon  
Mouse

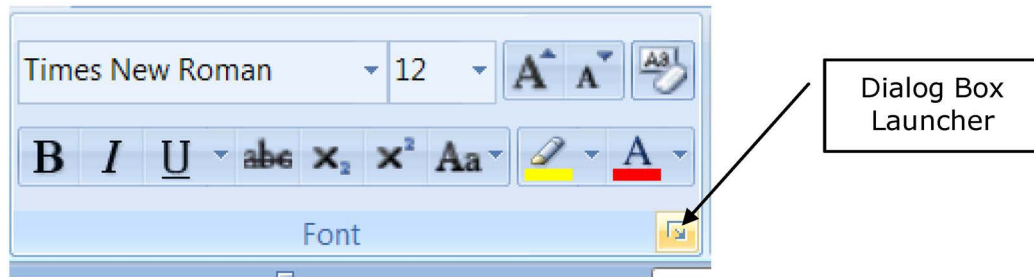
1. Click the left mouse button on the required tool.

 **Dialog Box**


To open a dialog box use the dialog box launcher when the dialog box is open, make a choice from the various options and click ok at the bottom of the dialog box. If you wish to change your mind and close the dialog box without making a choice then click on cancel. The dialog box will close without any choice being applied. If you would like help while the dialog box is open then click on the “?” in the top right hand corner this will bring up a help window that will display the relevant topics.

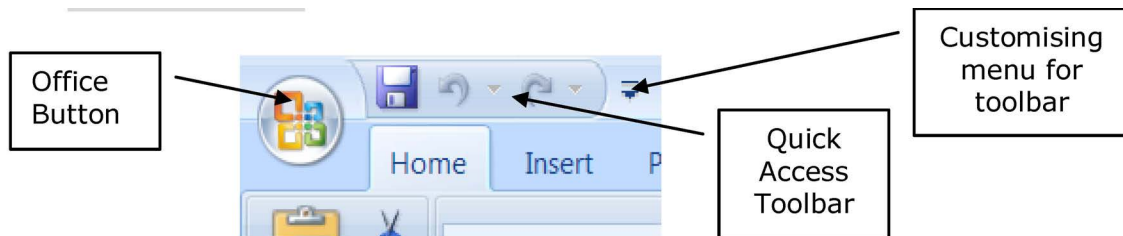
## **GROUPS**

Look at a group type on the ribbon such as font and in the bottom right hand corner of that group you may see a small box with an arrow, clicking this is another method to call up a dialog box, this time, directly from the ribbon. Many dialog boxes may be more familiar if you have used Access before.



**Toolbars**

There are only two toolbars within the new version of Office 2007 there is the quick access toolbar seen here next to the office button, and there is the mini toolbar

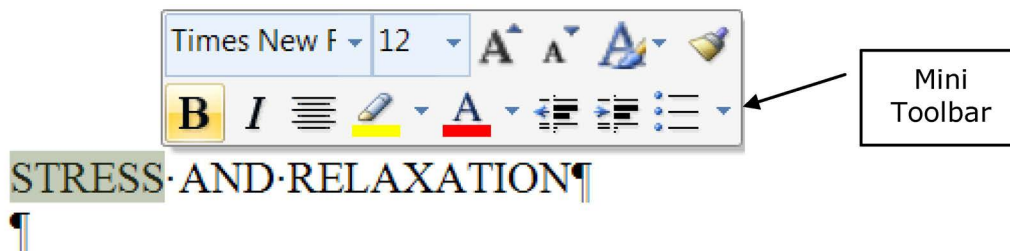


**Quick Access Toolbar**

By default there are only three buttons on the quick access toolbar but these can be edited and other regularly used buttons can be placed there. Using the drop down menu next to the quick access toolbar will allow the customisation of this toolbar adding your most often used commands.

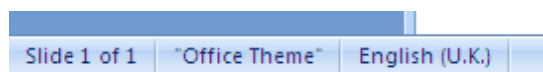
**Mini Toolbar**

Whenever text is selected within Word a small formatting toolbar will appear above the highlighted text it will disappear if the mouse cursor is moved away from the toolbar and will reappear when the mouse cursor is moved over the highlighted text again.



### Status Bar

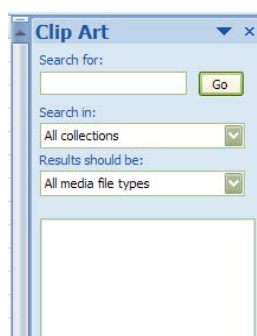
The Status bar, across the bottom of the screen, displays different information at different times. To the left is an indicator, which will display which page you are currently on, which column you are in number of words in document. If you right click on the empty area of the status bar a menu should appear showing the various items of information that can be given on the space bar merely click on the info that you wish displayed and it will appear on the status bar.



To the right of the status bar are firstly, the different views that can be used within Access, and on the far right, the zoom control



### Task Pane



A task pane is a window that collects commonly used actions in one place. The task pane enables you to quickly create or modify a file, perform a search, or view the clipboard.

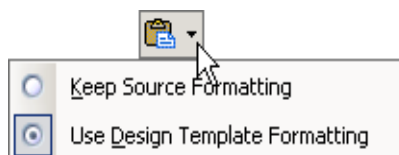
It is a Web-style area that you can either, dock along the right or left edge of the window or float anywhere on the screen. It displays information, commands and controls for choosing options. Like links on a Web page, the commands on a task pane are highlighted in blue text, they are underlined when you move the mouse pointer over them, and you run them with a single click.

A task pane is displayed automatically when you perform certain tasks, for example when you choose clipart from the Insert, Ribbon, to insert a picture

## 2.1 About Smart Tags

Smart Tags, first introduced in Microsoft Office XP, make it easier for you to complete some of the most common tasks in Access 2007 and provide you with more control over automatic features.

You do not have to complete any additional steps to make the Smart Tags appear or disappear in Access. The Paste Options, AutoCorrect Options and AutoFit smart tags appear automatically to allow you to quickly choose actions and remain in place until you begin another action. For example, when you complete a paste operation, the Paste Options smart tag (below) remains in place alongside your text until you begin typing new text.



A “smart tag” is a type of button in Microsoft Access 2007 that appears after certain actions, such as an automatic text correction or a copy-and-paste, have taken place. The button has a menu of options that help you control the result of the action. For instance, if Access automatically capitalizes the first letter of a word, but you want the word lowercased in this instance, you can click the “undo capitalization” option on the button menu to reverse the action.

Access includes several of these smart tag buttons. They function similarly but their look can vary and each has a specific purpose.



#### Autocorrect Options Smart Tag

The AutoCorrect Options Smart Tag appears after an automatic correction or change, such as a lowercased letter that’s changed to a capital or a network path that’s converted to a hyperlink. The Smart Tag shows as a small, blue box when you rest the mouse pointer near text that was changed; it then becomes a button icon which, when you point to it and click it, displays a menu. If you don’t want the correction, use the options on the menu to undo it; turn off this type of correction completely; or connect to the AutoCorrect dialog box to adjust settings.



#### Paste Options Smart Tag

The Paste Options Smart Tag gives you greater control and flexibility in choosing the format for a pasted item. The Smart Tag appears just below a pasted item, such as text, a table, or a slide, with options for formatting. For example, if you copy and paste a slide and insert it after a slide that uses a different design template, you can choose to retain the original design for the slide or let the pasted slide assume the design of the slide it now follows.



#### Autofit Options Smart Tag

The AutoFit Options Smart Tag appears when Access resizes text you’re typing to make it fit the current placeholder. If you don’t want the text to be resized, you can select options on the Smart Tag menu to undo the resizing or to connect to the AutoCorrect dialog box to turn AutoFit settings off. Also, for single-column layouts, you can change to a two-column layout, start a new slide to accommodate the text, or split the text between two slides.



#### Automatic Layout Options Smart Tag

The Automatic Layout Options Smart Tag appears after you insert an item, such as a picture, diagram, chart, or table, that changes the initial [layout](#) of the slide. To accommodate the added item, Access will automatically adjust the slide layout. If you want, use the options to undo the automatic layout or turn it off completely.

## 2.2 What is Microsoft Access?

The primary function of Microsoft Office Access 2007 is an information management program. Information is stored in separate lists called tables, and information in one table may relate to information in one or more other tables. These groups of information, when considered together as a whole, become a database.

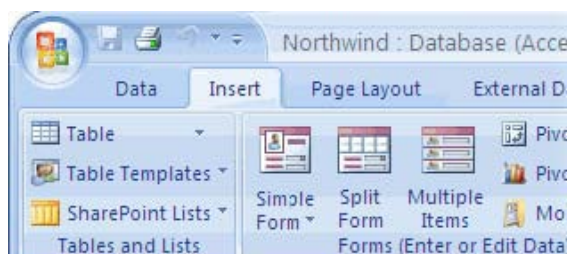
Access is designed to use the data in these databases to extract the information relevant to your situation. Access can also generate reports (such as quarterly sales by each employee) based on the data contained in the database. The Office 2007 package also features a lot of interconnectivity between the various programs, including a newly designed SharePoint service that lets users in your organization connect and share information using a special data centre via the Internet.

### New Features in Access 2007

If you are familiar with previous versions of Access, there are a large number of new features and a completely new interface in Access 2007. If you have never used Access before, don't worry – you will quickly become very familiar with these commands as time goes on!

#### New Interface Design

Commands hidden in four different menu layers are a thing of the past with Access 2007. Commands are now organized using a new action tab scheme. Under each tab are the commands relevant to the action described on the tab. This command set is referred to as the 'ribbon.' Finally, Access 2007 features contextual tabs showing data that is relevant only to the current object you are working on. We will explore the new interface in more detail later.



#### New Template Categories

Access 2007 features eleven new templates, each with their own defined tables, forms, reports, queries, and relationships. They are designed to let you start working right away, but are also completely customizable.

#### More Intuitive Sorting and Filtering

Access 2007 lets you pick from several predefined sorting methods with just a couple of clicks. Access also features a contextual quick sorting method using plain language. For example, if you have a column of numbers, Access can sort them Smallest to Largest. If you have a column of dates, Access can sort them from Oldest to Newest.

### **New Layout View**

When working with forms and reports, Access 2007 features an in-between view called Layout View. It allows you to see a live form or report with real data in it, but also lets you adjust the position of certain elements in your form or report on the fly. You can also define 'mini layouts' that allow you to move several controls as a group. Access still features the more in-depth Design view, used to fine tune every aspect of a control.

### **Enhanced Tooltips**

When you hover your mouse above certain command icons, Access 2007 lists the command name, a short description of the command, and an example (if applicable). (Tooltips in previous Office programs listed only the command name.)

### **Automatic Calendar**

When entering information into a Date field, a small icon will appear allowing you to choose a date from a small calendar. This eliminates the need to enter a date as 03/22/2007 – just open the calendar and pick the date!

### **Rich Text in Memo Fields**

If a table makes use of a memo field, data can now be stored as something other than plain text. Using an HTML-based text format, Access lets you automatically add colours, sizes, and formatting to the text in a memo field.

### **Quickly Create New Objects using the Insert Tab**

In previous versions of Access, you had to move and minimize windows to find the Database window, pick the category of database object, and then choose to create a new object. With the Insert tab and ribbon, you can create a form based on a table with only two clicks (versus as many as a dozen clicks in the past).

If you need a new table at any point, simply click Table on the Insert tab and start entering data. Access 2007 even lets you paste data directly from a Microsoft Excel spreadsheet. Data types and formatting will be found and preserved automatically.

### **Total Row in Datasheet View**

Every table in Datasheet view features an automatic Total Row at the bottom. You can find the sum, count, average, maximum, minimum, standard deviation, or variance using the Total Row.

### **Field Templates**

In the past, it was potentially a long and tedious task to mould a number data type into a usable field for your organization. Now, you can simply click and drag a predefined field from a list right into your table at any point.

### **Field List Task Pane**

When creating a query in previous versions of Access, each table had to be inserted into Design view in order to use various fields. Now, all fields in all tables are visible in a list. Just drag and drop the ones you need.

### **Split Forms**

A Split Form is new to Access 2007; it combines Datasheet and Form view together as one. The Datasheet view can be placed on the top, bottom, left, or right side of the Form.

### **Multivalued Fields**

A single field can contain multiple values in Access 2007. Imagine you have a product that falls into a few different categories. In previous versions of Access and other database management programs, this would have required a many-to-many relationship to be defined. Access 2007 handles this complicated background relationship with only an extra click when designing a field.

### **Attachment Data Type**

If you want to e-mail a document to a co-worker or some pictures to family members, the files would be sent as an attachment to the e-mail. Access 2007 features a similar attachment data type that can hold documents, charts, sound files, binary files, or any other type of file. Attachments are also automatically compressed when necessary to reduce the overall size of the database file.

### **Alternating Background Colour**

Datasheet view, reports, and long forms now feature the ability to alternate the background colours of each row. Long lists of data become much easier to read!

### **Navigation Pane**

The Navigation Pane is an ever-present feature on the left side of the Access window. It contains a listing of all objects currently contained in the database. The Navigation Pane can also be collapsed to make more room in the window.

### **Embedded Macros**

Though macros go beyond the scope of this manual, macros in Access 2007 are stored inside a database object instead of being a separate object. This makes these macros much safer to use.

### **Newly Designed Help**

Office 2007 makes wide use of Office Online, a resource on the Internet to find help on a certain topic. Access 2007 also has different help levels; if you are an end-user rather than a developer who makes database code, you can tailor the help file to search only the more basic topics.

### **Increased and Enhanced Connectivity**

One of the goals of Office 2007 was to create a centralized location where members of your organization can meet and share data over the Internet. Though many of these features are more advanced topics of Access not covered in this manual, Access features a huge variety of SharePoint services. Access lets you:

- Collect data from Microsoft Outlook
- Store and retrieve data on a SharePoint server
- Integrate with SharePoint Workflow services
- Retrieve data from linked SharePoint lists
- Store a SharePoint list offline for use away from your organization
- Create and save import or export operations if you perform the same online task multiple times

### **Export Data to PDF or XPS**

You can export a form, report, or datasheet as a PDF (Portable Document Format) or XPS (XML Paper Specification) to easily print, post, and e-mail regardless of the computer platform your intended recipient(s) are using.

**New Report View**

Report view allows you to browse your report without having to print or preview it. You can also sort and filter records on the fly.

**Enhanced Group, Sort, and Total Feature**

You can apply new grouping and sorting levels much easier with Access 2007. Grouping is done following a natural sentence structure; you simply fill in the blanks along the way.

**Additional Security Features**

Though many of the security features go beyond the scope of this manual, Access 2007 (and indeed the entire Office 2007 suite) features a number of security enhancements and SharePoint services. This functionality includes:

- Enhanced security by disabling macros and code only until needed
- Revision tracking to see who modified what and when
- Permission setting to restrict data modification
- Restore deleted data from the SharePoint Recycle Bin in case of accidental deletion
- Open forms and reports using SharePoint even if Access is not open on your computer
- Keep track of changes made to memo fields

Basic Terminology

<b>Database</b>			
<b>Table1</b>			
<b>Record</b>	field	field	field
<b>Record</b>	field	field	field
<b>Record</b>	field	field	field
<b>Record</b>	field	field	field
<b>Record</b>	field	field	field
<b>Table2</b>			
<b>Record</b>	field	field	
<b>Record</b>	field	field	
<b>Record</b>	field	field	
<b>Record</b>	field	field	
<b>Record</b>	field	field	

Let's take a look at the terminology used in database-speak, starting with the basics. Consider the following diagram:

Let's look at each piece of the database.

**Field**

A field is the smallest piece of a database; that is, one specific piece of information like a number, a word, a date, a picture, or a reference for some other piece of data. Each column you see in the diagram would all be the same data type; that is, one column of data would all be numbers.

**Record**

A record is a collection of one or more fields together in a row. (In a real database, you would not count the word 'Record' as depicted in the diagram – this is just to help visualize the concept.)

**Table**

A table is comprised of one or more records. Each table also has a unique name.

**Database**

A database is comprised of one or more tables. Each database is also given a unique name.

### **Form**

A form is a tool that is used to easily and accurately enter data into a table. A form presents one record of a database at a time to a user, or allows a user to enter data into the database one record at a time.

### **Query**

A query is just like a question you ask the database. There are two types of queries: select and action. A select query will extract and display data based on criteria you provide. An action query will find all data relevant to your query and perform some sort of operation on it. A query can be performed on one or more tables in a database.

### **Report**

A report presents the data found by a query. A report can be formatted to show summaries, calculations, charts, and more based on the data returned by a query. Access takes the report one step further by letting you organize and format a report into a sleek, professional document suitable for printing, exporting, or e-mailing.

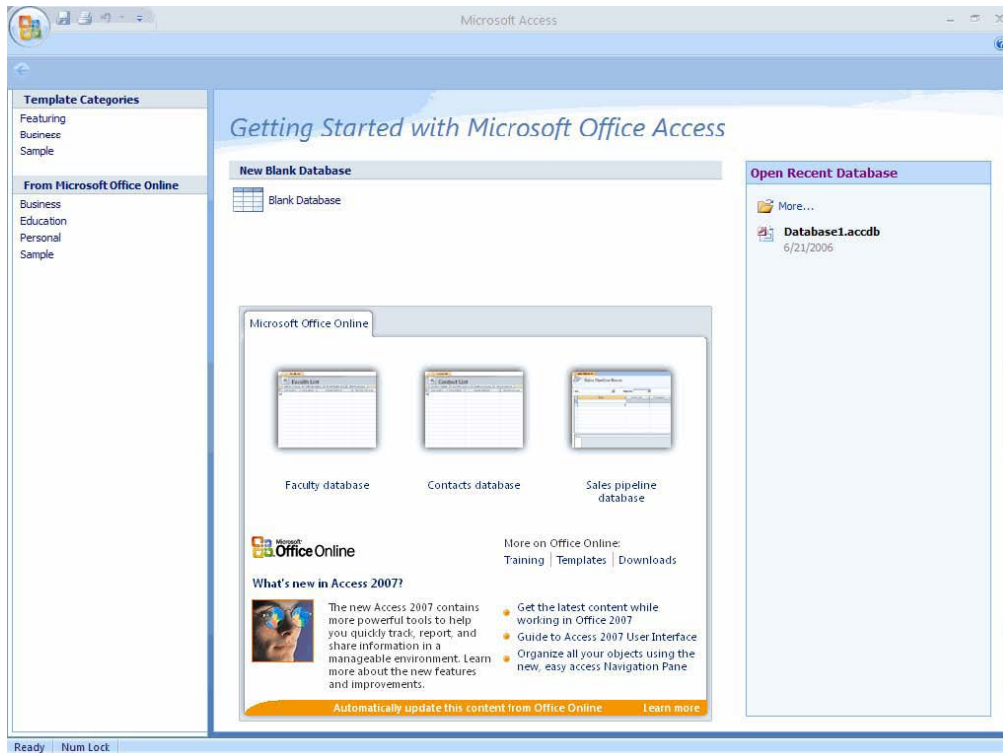
This might seem like a lot to remember, but don't worry – this terminology will be used heavily throughout this manual and soon it will be second nature!



## Interface Overview

In this section, we will learn about the Access starting screen and the view of a typical working database. We will introduce the views piece by piece in this section of the lesson. There are a large number of updates to learn about, but with time you will wonder how you ever managed without them!

If you have ever used Access before, the welcome screen for Microsoft Access 2007 has been completely redesigned. However, the layout is much easier to use, especially if you have never used Access before:

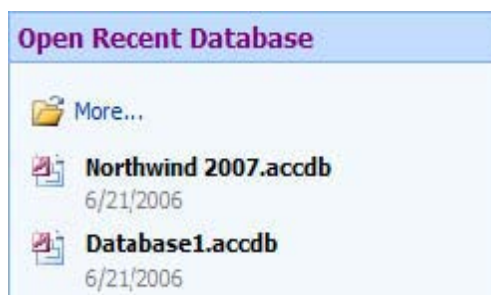


► Exploring the different parts of the Access 2007 Getting Started interface:

**Template Pane**

On the left-hand side of the Access window is the Template pane: Access has a number of templates built right into the program. To access the different categories of templates, simply click a category to see the available template files.

**Recent Files**



The right-hand side of the window lists any recently opened database files, just like the Office Menu:

Click one of the database files to open the file. If you want to open a database file stored somewhere else on your computer or on another network, click the More link and browse to the file you want to open, and then click the Open button.

**New Blank Database**



In the centre of the window is a link to create a new Blank Database. Use this link to make your own database from scratch.

**Microsoft Office Online**

The centre of the Access window is a special page that extracts content from Microsoft Office Online (a service provided over the Internet). Microsoft Office Online provides quick links to different templates, training material, and other downloads. It also provides links directly to Office Online where you can read



about updates to Office 2007 as they become available.

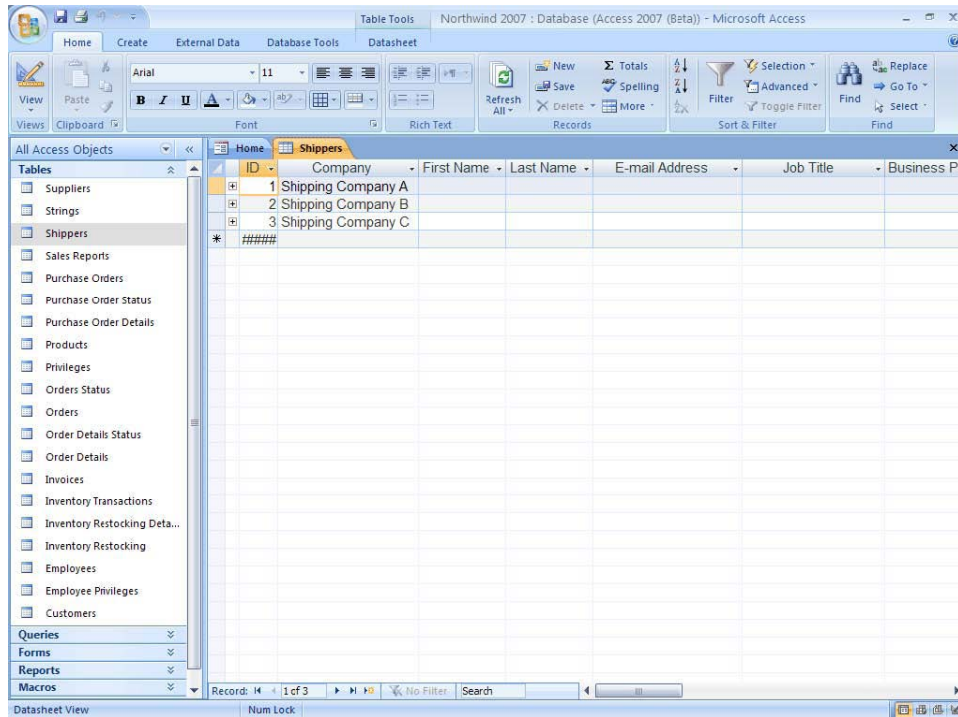
**Status bar**

Finally, at the very bottom of the Access window is the status bar. This bar will give information about the status of Access, if any particular lock keys are enabled on your keyboard, which view is currently active, and more.



► Consider the following diagram showing an open database:

The new interface design of Access 2007 makes it easy for novice and expert users alike to get working right away. Now that we know a little bit more about the Getting Started page, let's examine the major pieces of the interface that is visible when a file is opened.



In this diagram, we can see the Office Menu and Quick Access toolbar present in the upper left-hand corner. At the bottom of the diagram is the Status bar, telling us that we are currently viewing a table in Datasheet view. Now let's explore the real power of Access 2007, including the use of tabs and the ribbon.

**Command Tabs**

Along the top of the window are the command tabs:



In the past, the Office package made use of menus that contained a listing of commands. At their core, the command tabs are essentially the same thing as menus but with a few big changes. For starters, the grouping of commands in tabs is much more intuitive. The commands listed under each tab are also the only commands that are applicable to your current view of the database.

Access 2007 takes this one step further with the addition of contextual tabs. The tab labelled Table Tools - Datasheet appears only when you have selected a table in Datasheet view. This tab will contain even more specific commands that can be used on a table being viewed in Datasheet view and will only be visible when a table is being viewed in Datasheet view.

**Ribbons**

Consider the Home ribbon tab that is selected in the diagram above. Beneath the tab is a listing of all commands that are performed most often on the currently selected object, contained in what Microsoft refers to as the 'ribbon':



The ribbon was designed to allow access to all functionality of a tab at once. Also, the commands in the ribbon are only the commands that are available for use at the time.

**Navigation Pane**




On the right side of the Access window is the Navigation Pane. It is always visible on the left side of the screen, but can be expanded (») or shrunk («) by clicking the double arrows. The Navigation Pane allows quick and easy access to any of the database objects.

Click the pull-down arrow beside the Navigation Pane title (  ) to show a list of all object categories:

**Object Tabs**

In previous versions of Access, any open database object was opened in its own window and designed to ‘float’ inside the Access Screen. When several database objects were open at once, it was difficult to navigate through all of the windows easily. Access 2007 has solved that problem by using tabs:



Simply click any of the tabs visible on the top to show the database object. Opening many database objects will create left and right facing arrows (  and  ); click on the arrow to scroll that direction through the open database objects. If you want to close an object you are no longer using, click the Close button (  ) located beside the tabs.

**Help Button**




 The Help button, located directly under the title bar, launches the Access help screen:

Click a topic to view help about that particular subject.

As we explore more of the features and functionality of Access, we will discover how to use the rest of the interface.

## Closing Microsoft Access

When you have finished using Access, click either Office Menu Exit Access or click the program's close button (  ) in the upper-right hand side of the Access window. If you have any unsaved work still open, Access will allow you to save any changes you have made before the program shuts down.

## 2.3 First Steps

Making a database might seem like a pretty big job, but taking the time to design one properly will save a lot of time down the road. You are exposed to databases everyday use them all the time probably without knowing it. In fact, you are likely in several, yourself!

The easiest method of identifying yourself in day to day life is a simple handshake and saying "Hello, my name is..." But you can't really shake hands with a computer. Using your name, even your full name, isn't a very good option either because there may be hundreds of people out there with exactly the same name as you. Therefore, you must be assigned some unique identifier, the most recognizable being your Social Security Number (SSN) or Social Insurance Number (SIN). No one else in the country has the same SSN as you.

This practice holds true for databases, too. Earlier in this manual you may recall seeing the term ‘primary key’. Every row in a table should have at least one field that is unique from every other record. That field is usually a number, and the unique field is referred to as the primary key. It is not imperative to have a primary key, but it makes the design of the database much easier and eliminates the possibility of duplicate data (which does nothing but confuse the issue!) It also allows a database program to (in most cases) search faster and more efficiently. Therefore, it is good practice to have a primary key for every table you make.

Let’s quickly review what we know about databases: they are made up of tables, and in each table are several records (or rows) of data. Every record is made up of one or more fields, and every record in a table is different from every other record because of the unique primary key. Knowing this, and with the knowledge of the commands we learned so far, we are ready to start making databases!

For the remainder of this manual, let’s pretend that you are Bugs Rabbit, CEO of an upstart animation company, Warner Cousins. You want to use Access 2007 to monitor the expenses made by you and your employees.

## Planning a Database

Before you start using Access to create a database, take the time to answer a few questions:

1. Why do you need a database? You want to keep track of the expenses made by you and your employees.
2. Who will be using the database? Any employee of Warner Cousins will have access to this database.
3. What kind of data would be extracted from the database? Total expenses of the company, total expenses by each employee, expenses by each category.

Once you have answered these questions, it is time to decide how to design the tables for your database. What fields of data do you need? What data types will the fields need to be? What tables would be important? Which fields will go in which table, and do the placements make sense?

Next comes the planning of relationships between the data. A big list of numbers doesn’t mean much by itself, but when constructed based on other data, it becomes meaningful. And finally, make sure that you talk to everyone who will be using the database will be able to get the data they need. Let’s examine some of the details.

You will obviously need an expense table that contains at least the following: who made the purchase, what did they purchase, how much was it, and when did they purchase it?

The payroll department already has a listing of the people who work for you:

- SIN (or company ID #)
- Name
- Address
- Phone Number
- Company Position

The database now should have two tables: an expenses table and an employee table. Now, there needs to be some sort of link between the two tables. You could use the name of each person, but that may become confusing, especially if your company grows into the hundreds. There is another option, however. You can use the SIN (or company ID) of each employee to tie their purchase to their personal information.

In database design, your most powerful tool is not the computer, but rather a piece of paper and a pencil (and a big eraser). Not only can you easily change the information you might need, but you can also visualize the information.

Consider the following diagram, based on the paragraph above:

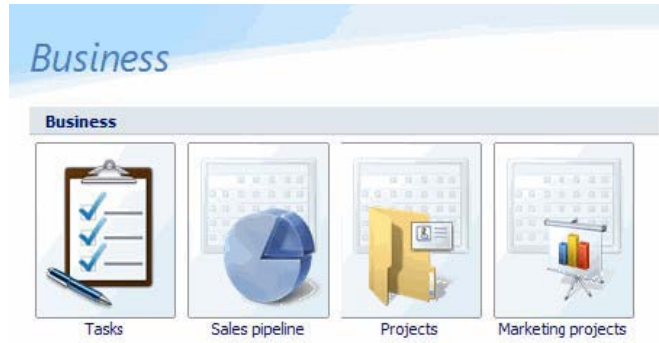
Expenses				Employees				
Employee ID	Date	Expense Type	Amount	Employee ID	Name	Address	Phone	Title
2	5/7/2006	Erasers	10	1	Bugs Rabbit	44 Carrot Dr.	555-1212	CEO
2	5/25/2006	Lunch	50	2	Elmer Funn	123 Wabbit Way	555-9876	VP
1	6/1/2006	Flight	600					

It might not look like much, but we have a database. It contains fields, records, a primary key for each record in each table, and a relationship between the data. We can see that employee 2 has made two purchases, and employee 1 only one. This might seem silly for an example of this size; why not just say Elmer Funn instead of an employee ID? As mentioned above, this becomes impractical if your organization grows. Imagine that your company has grown to employ thousands of people with hundreds of expenses a day – that becomes a pile of data in a big hurry! You might employ three or four Elmer Funnns by now, so using a unique number to identify each employee becomes much more practical.

### Creating a Database from a Template



When you launch Access 2007, you will see the Getting Started page. From here you can choose from a number of different templates already built into Access. Choose a category on the left side of the screen:



Then choose a template that best suits your needs from the centre of the window:



Once you have chosen a template, choose a save location (default of My Documents) and then click Download/Open (depending on if you are opening from an online or offline template):

The template will open containing a number of pre-built database objects, including tables and relationships between the tables. Start entering data or modify the design of the objects as you see fit.

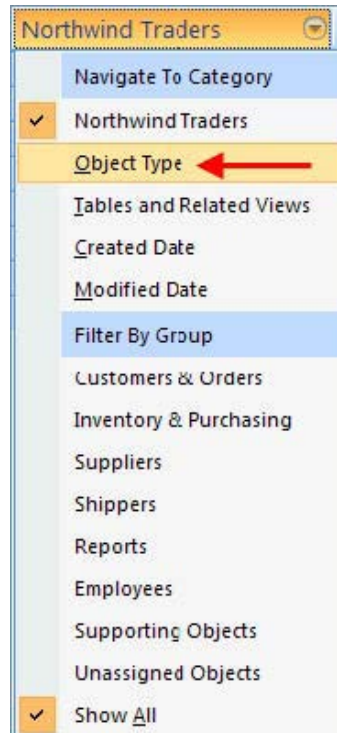
### Creating a Blank Database



Although Access contains a number of templates already built in, it is important to understand how to create a database from scratch.


1. From the Getting Started page, click the Blank Database link in the centre of the Access window:
2. On the right side of the Access window, select a location (default of My Documents) to save the database and click Create:
3. A new, blank database will appear in the Access window.

### Using Database Objects




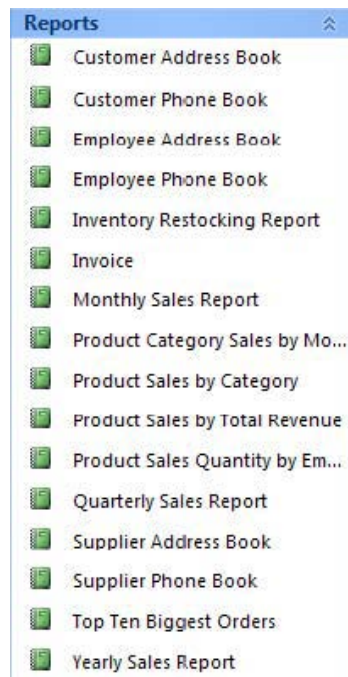
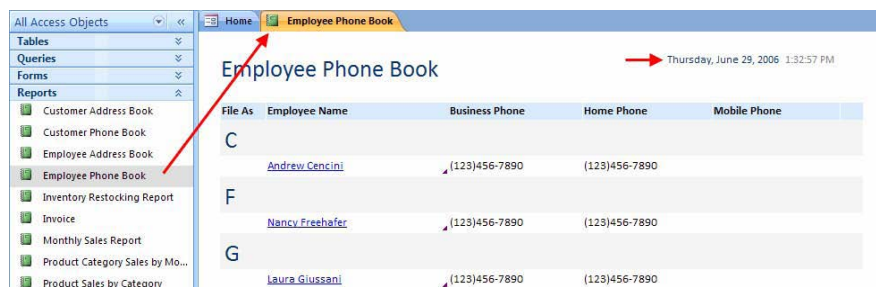
A database object is defined as some individual piece of a database that can be used on its own. We have discussed the major objects: tables, queries, forms, reports, and macros.

The Navigation Pane is used to control and use the objects of an Access 2007 database.

1. Expand the Navigation Pane (  ) and click the pull-down arrow beside the title to show the full Navigation Pane toolbar.
2. Then, click Object Type to display all objects currently in the database:
3. All objects currently in the database are categorized by their object type:



4) If you want to see the different objects in each category, click  to expand that category. Each object contained in each category is listed in alphabetical order:



To open an object, simply double-click it. It will open in the main part of the Access window and will have its own identifying tab.

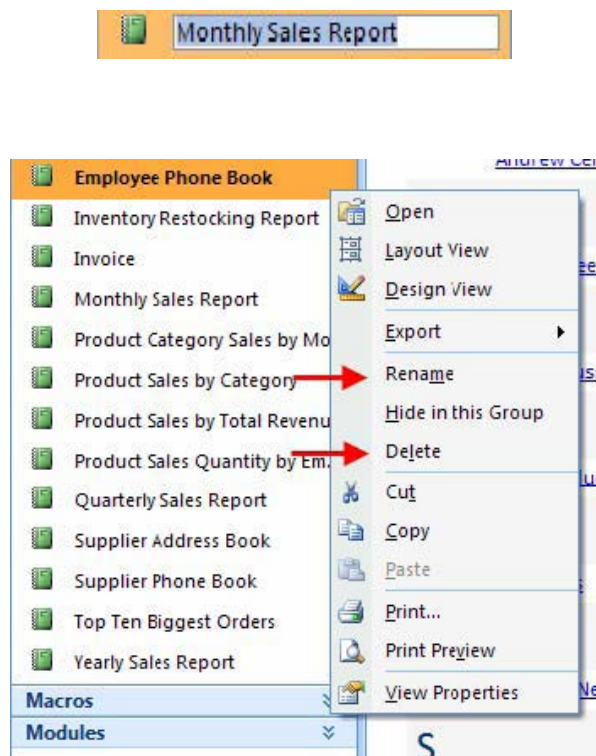
Some objects, such as the report, include a time and date stamp right on the object:

Access lets you rename or delete objects in your database. However in order to do so, the object must first be closed.

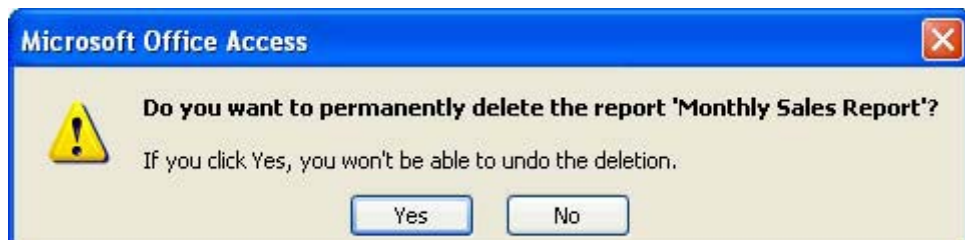
► **To delete or rename an object,**

You can do so by making use of right-clicking. To do this,

1. Point to an object and click the right mouse button. A pop-up menu will appear giving you quick access to certain commands:



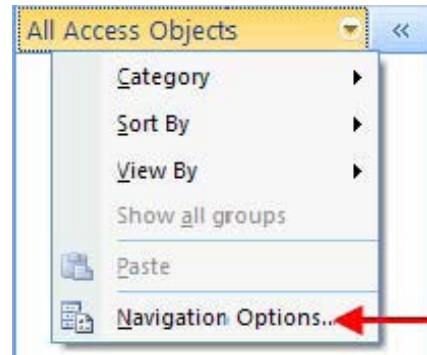
2. If you click Rename, simply type a new name for the object, and then press Enter:
3. If you need to delete an object, Access warns you that the delete operation cannot be undone:
4. Click 'Yes' to delete the selected object.



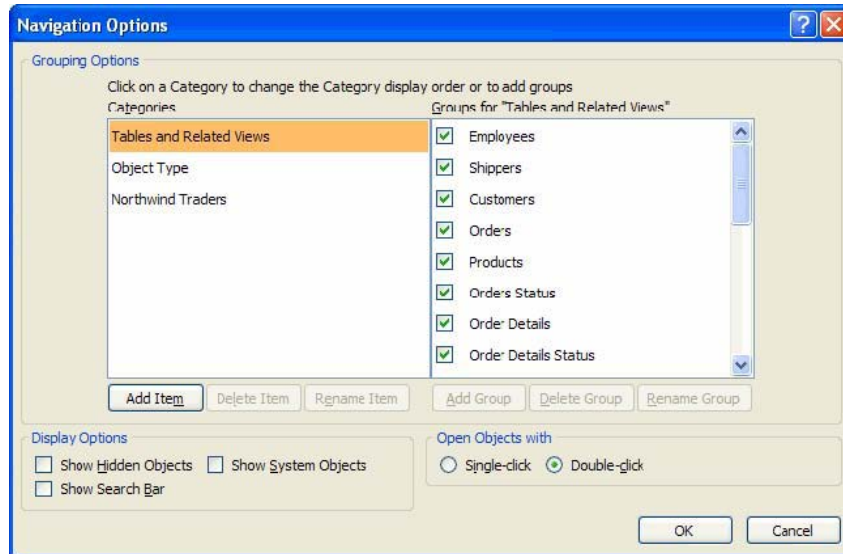
## Setting Navigation Options

Access 2007 also gives you full ability to customize the Navigation Pane.

► To set the navigation options,

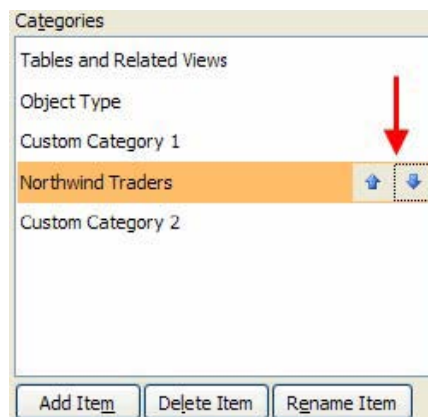


1. Right click on the title bar of the Navigation Pane and click Navigation Options:
2. The Navigation Options dialogue box will appear.
3. The following dialogue box is taken from the Northwind Sample database:
4. This dialogue box contains three main parts: a category list, a group list, and a few other options.
5. The first two options in the Categories list are fixed (Tables and Related Views and Object Type). However, you can create as many custom categories as you like. For example, the Northwind Traders category was added specifically for



this database.

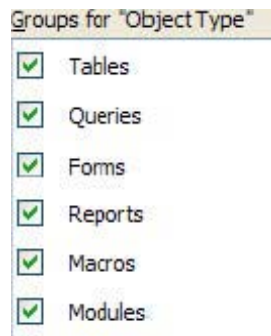
6. If you highlight the custom category, you have the ability to move it up and down through any custom categories you may have created:
7. Use the Delete Item and Rename Item buttons at the bottom of the categories list to perform the associated action on the selected category. If you ever need to delete a category, the objects that were in the category will not be deleted.



8. On the right-hand side of the Navigation Options dialogue box is a list of groups that are included in a category. For example, the groups contained in the Object Type category we have already used previously in this manual:
9. Highlighting the Northwind Traders category will display all of the custom groups used in the category:

Note that there is one group that is always present in a custom category: Unassigned Objects.

The options at the bottom of the dialogue box give you a bit more flexibility when it comes to the displaying of objects:



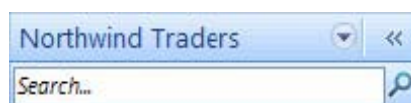
**Show Hidden Objects**

If you find your database growing to a level that can be a bit hard to manage, you have the ability to hide certain objects. This means that they simply won't be shown in the Navigation Pane and can make it easier to find the object you need. Checking this check box will override any Hide command that you give to an object.

**Show System Objects**

There are some background objects and tables that Access uses when you are using a database. Check this box to display them.

**Show Search Bar**





If you end up with a very large and complex database, and would rather not hide any objects, you can use a small, simple search bar which will then appear at the top of the Navigation Pane:

Enter the name of the object you are searching for. As you type, Access will automatically filter the different objects based on the keyword you are inputting.

The search bar does not, however, give you a direct list of results. Instead it filters the relevant names for each group as you type. For example, if you know the object you are looking for includes the word 'order', begin typing it into the search bar. Access will show you all of the relevant results:

Lastly, you have the option to open an object from the Navigation Pane using either a single click (like a Web page hyperlink) or double-click (default).

# Section 3 Understanding Access

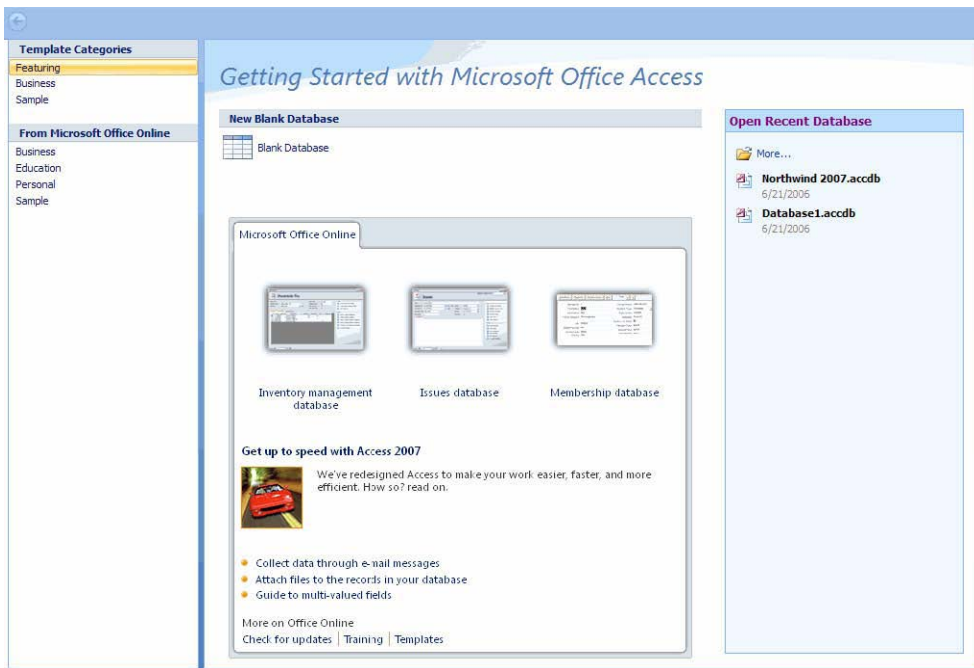
By the end of this section you will be able to

- Title Bar
- Ribbons
- The Access window
- Ask a Question
- Create a database
- Understand basic security

### 3.1 Using the Getting Started Window

The Getting Started window appears every time you open Access without directly opening a file, or after you close an opened database without actually closing Access. Before you have your own established database(s) you can work on, you will likely visit this page every time you want to create a new database or check out the latest information about Access 2007 using Microsoft Office Online.

#### Overview of the Window



**The Getting Started window is divided into three parts:**

#### **Template Categories**

Choose the category of template you want to use for your database.

#### **New Database and Office Online \ Template Type**

The default display of the Getting Started window is a link to create a New Blank Database and the Microsoft Office Online start page.

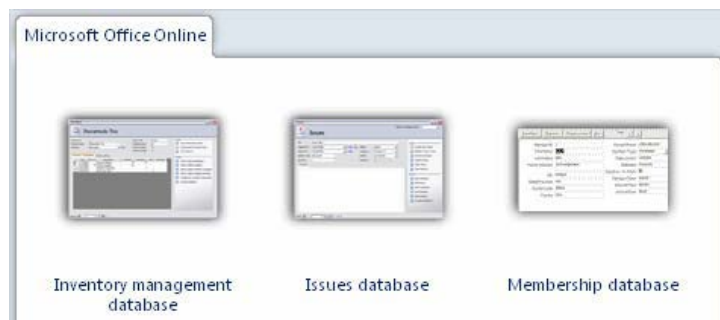
If you have selected a template category from the left window pane, here you will choose the specific template you want to use.

**Open Recent Database**

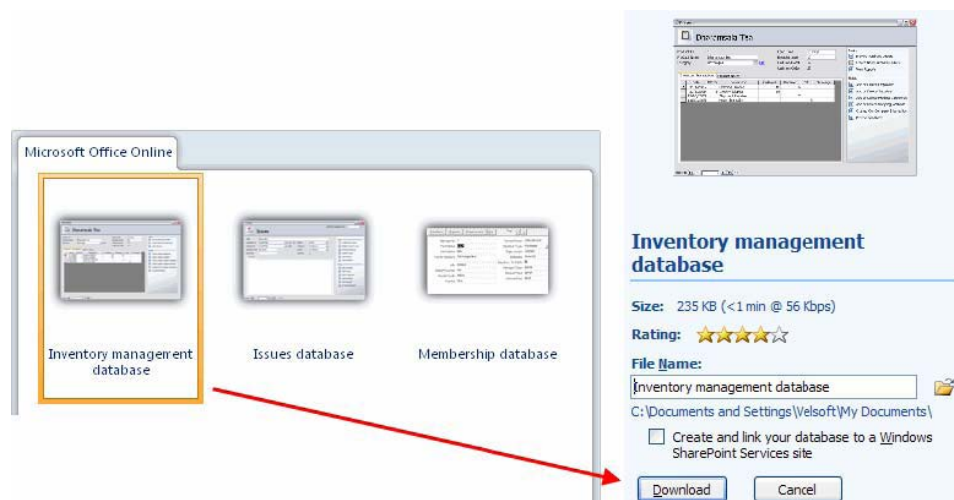
Any database files you have recently opened will be listed on the right side of the window, simply double-click a file name to open it.

**Navigating Through the Window**

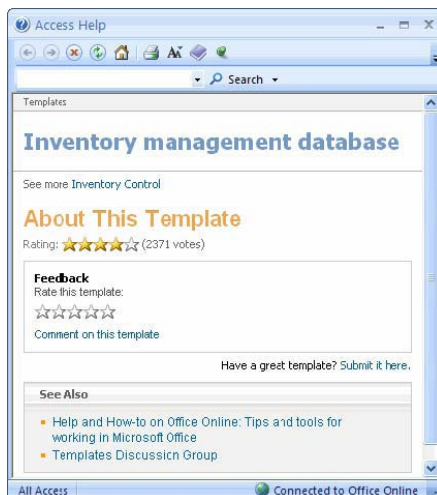
To navigate through the Getting Started window is easy just point and click! Using Microsoft Office Online lets you read up on the latest updates to Access, provides some tips and tricks about using the program, and lets you download new templates to try. You can download any of the templates available on the top portion of the Office Online window:



1. Simply double-click the database template you would like to download. The right portion of the Access window will change to accommodate extra details about the template:



2. You can give the template a new name if you wish by typing it into the File Name text box and then click Download. Once the file successfully downloads, the Access Help window will appear giving you some information about the template as well as the ability to rate the template:

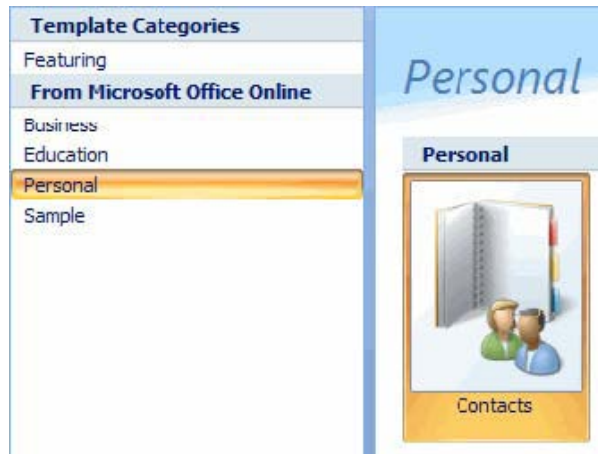


3. Close the Access Help window to begin working with the template.
4. The other links listed in the Microsoft Office Online section of the Getting Started window are hyperlinks that will start your default browser and direct you to the Microsoft Office Online web site, which is filled with new information, product updates, more tutorials, and a wealth of other resources.

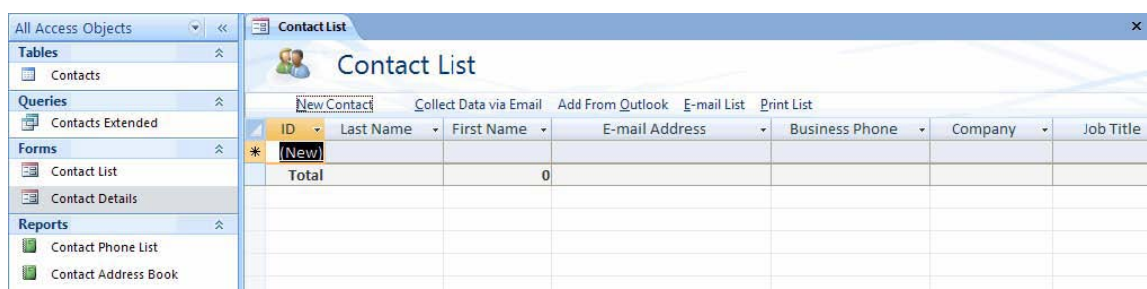
## Creating a Database from a Template

If you are just starting out with Access, or if you have a specific application in mind for a database, you can make use of the templates already provided in Access 2007. The templates are fully functional tables, reports, queries, and forms that are all related and ready to go – all you have to do is add the data!

### ► To use a template.



1. Choose a category in the left side of the window. For our purposes, let's start off with something basic. Access contains a straightforward Contact database under the Personal category.
2. Choose Personal from the categories and then double-click the Contacts database to prepare to open it:
3. Details about the template will be shown on the right-hand side of the screen, click the Download button to download it from Office Online and open it. When the template opens, close the Access Help window that appears.
4. The template automatically opens the Contact List form which allows you to enter your own contacts one by one into the database. That's all there is to creating a database from a template! All of the objects are already established;



all that is required now is for you to enter your data.

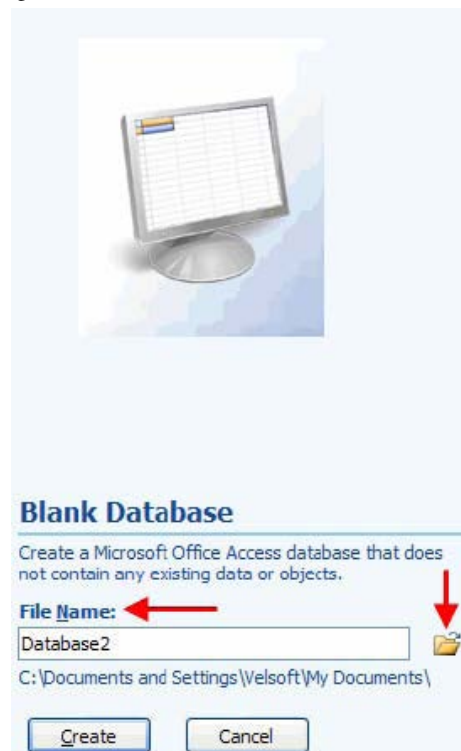
## Creating a Blank Database


Most of the time, the templates provided in Access will be sufficient to use as a base to get started. However, if you prefer to construct your database from the ground up, doing so is easy with only a few clicks.

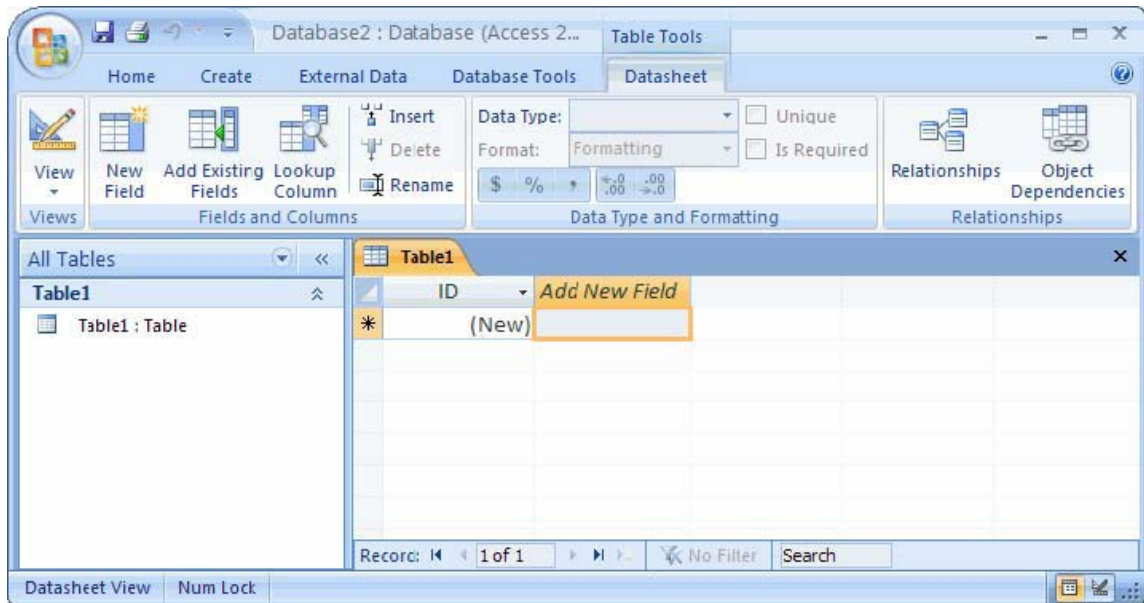
### ► To create a blank database



1. From the Getting Started page, click Blank Database under the New Blank Database heading:



2. On the right-hand side of the screen, give the new database a name by typing it into the File Name box. If you want to create the database in a specific location, click the small folder icon (  ) to the right of the text box. The new file path you select will be shown underneath the File Name text box; Access will by default use the My Documents folder:
3. Finally, click the Create button. The new empty database will open with a single empty table contained inside:
4. Now you know how easy it is to get started with a new database using Access. Later in this manual we will explore the usage of the different objects contained inside, as well as how to properly enter data into a database, or more properly, populate a database.

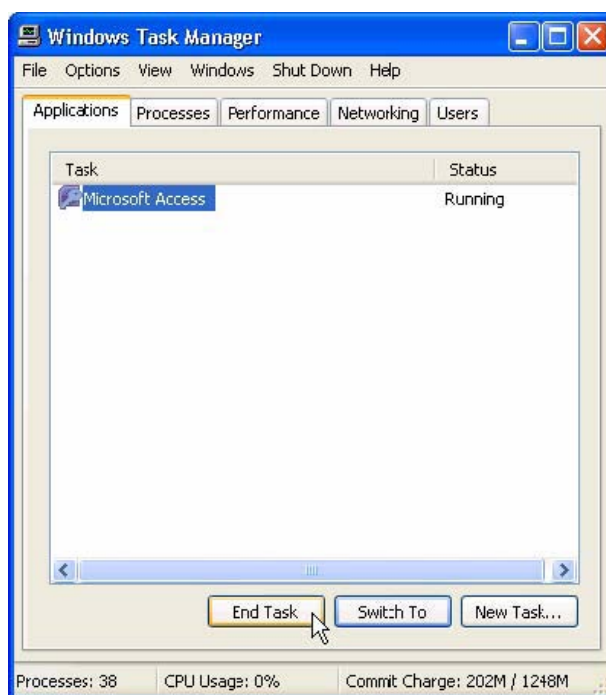


## 3.2 Access and Windows

The Microsoft Office packages were primarily designed to run in the Microsoft Windows operating system. Further iterations of the Office package have been ported for use in other operating systems, such as the Macintosh operating systems. Because the Office package is designed to run in a particular environment, it is also capable of using some features of the operating system (as well as being limited by some of the operating system's shortfalls!). In this lesson we will explore the operation of Access 2007 as a whole.

### Recovering Access

Despite the best efforts of network administrators, programmers, and home users, there will inevitably come the time where something will go wrong. Viruses, spyware, power outages, and equipment failures can cause havoc if you are unprepared. However, you do have some tools available to use if you get stuck while using Access. Much of the data manipulation done in Access is saved automatically as soon as a particular operation has completed. For example, when you add data to a table, it is saved in the table as soon as the cursor moves to another field.



The other manual operations that can be performed in Access, such as the development of macros, forms and reports, must be saved by the user. However, Access does have a general AutoSave feature that is used every 10 minutes to save any work that has been done.

Should Access itself seem unresponsive, there might be a number of causes. If your computer is experiencing heavy network traffic or processor load, some operations regarding Access are placed in a priority queue. With the speed and capability of today's computers, this delay will likely be minor. Nonetheless, the best first option is to wait for a few moments. If you see no activity, try opening another program on your computer. If the other program does not start, then your computer is likely stuck in a processing loop somewhere.

Pressing Ctrl + Alt + Delete in the Windows 2000/XP environment will open the Task Manager. Check the Applications tab. Should you see (Not Responding) beside Access or some other program, highlight the program in the list and click End Task. If you don't see any unresponsive programs, it may be a background process. Click the Processes tab. Scroll up and down through the list of processes. You see one program with a 99% CPU usage, that process is likely stuck. Highlight the process and click End Task.

If you manage to close Access without having to restart your computer, Access will have saved a backup file in the same folder as the original working file. The backup file will be named filename\_Backup.

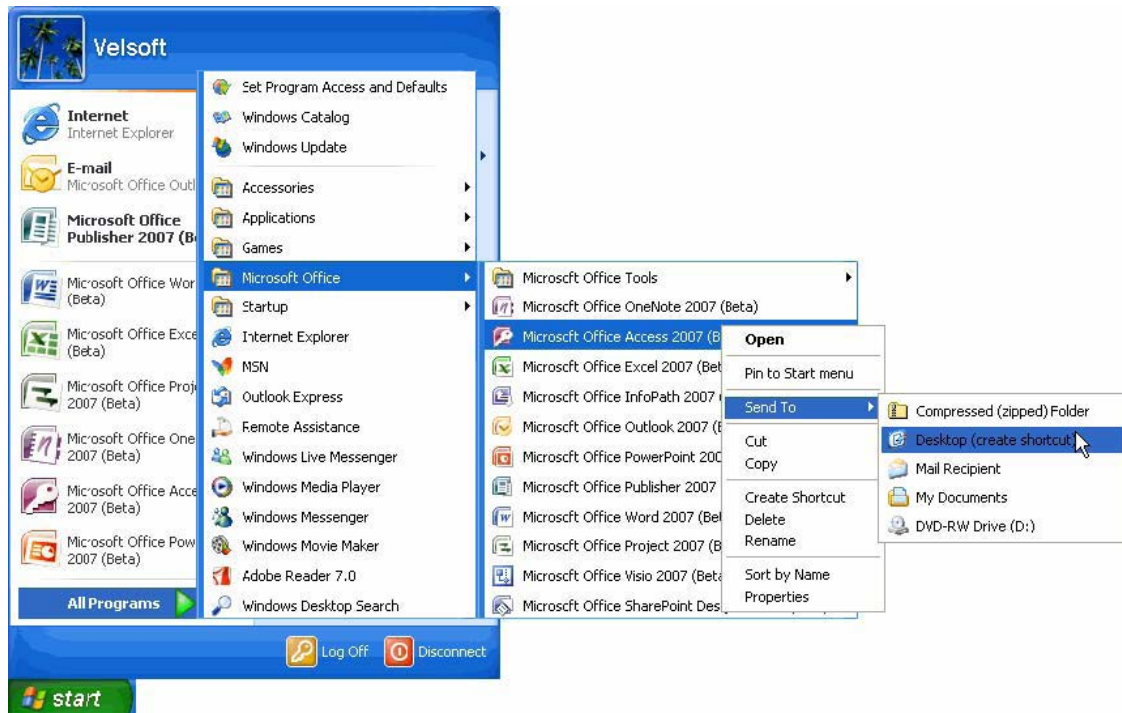
If worst comes to worst and you cannot shut down Windows or end a process, you must physically power off or restart your computer.

### Starting Access on Windows Boot

Microsoft Windows contains a special folder in which you can add a program shortcut to have that program start every time Windows starts. Your computer may already have certain programs that start when your computer starts, such as antivirus and instant messaging software.

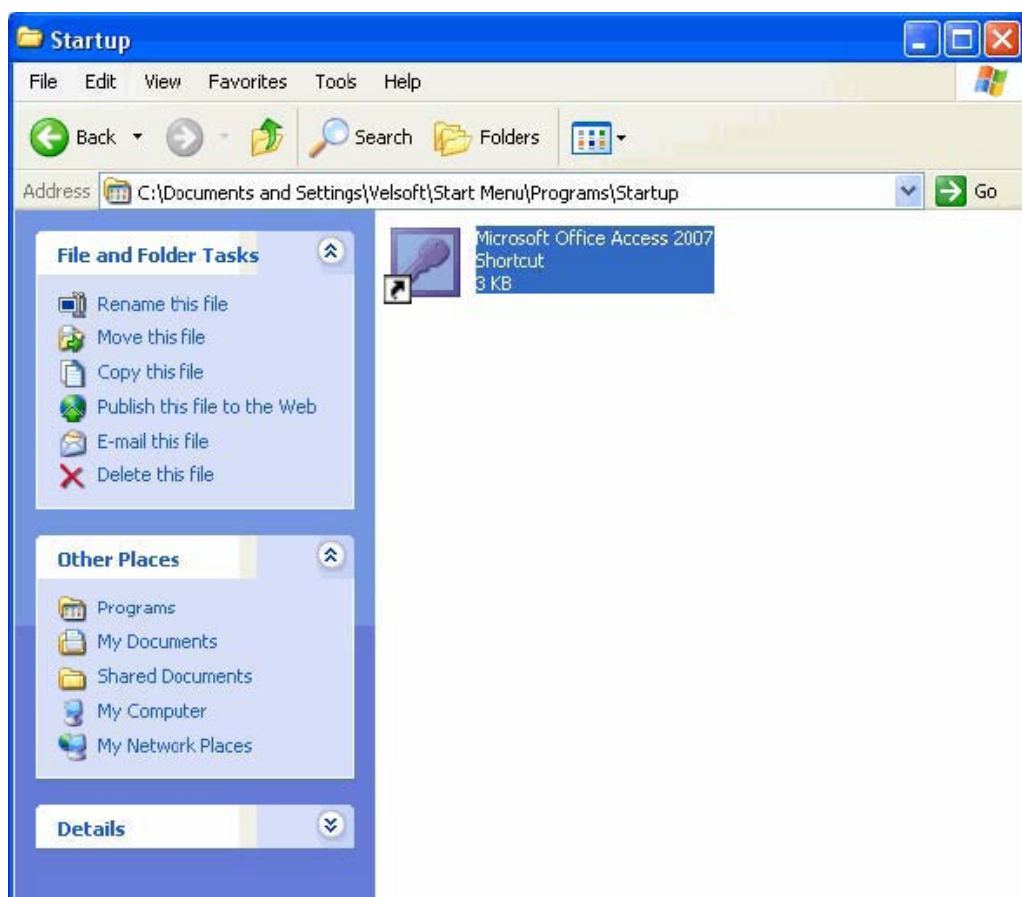
#### ► To have Access 2007 start when your computer starts.

1. Locate the icon you use to start Microsoft Access 2007 normally, such as in the Start Menu.
2. Right click on the icon, point to Send To, and then click Desktop:



3. Once the icon has been created, or if you already have an icon on your desktop, right-click the icon and select Cut:

4. Browse to the following folder on your computer: C:\Documents and Settings\

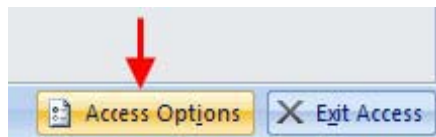


5. Every time your computer starts, Access will start as well. You can do this for any program on your computer.

But be careful – adding too many programs will significantly lengthen the time needed to boot your computer. Plus, if you want to use your computer for a presentation or something other than the programs in the Startup folder, you must first wait for all of the programs to open before you can close them and free up system resources.

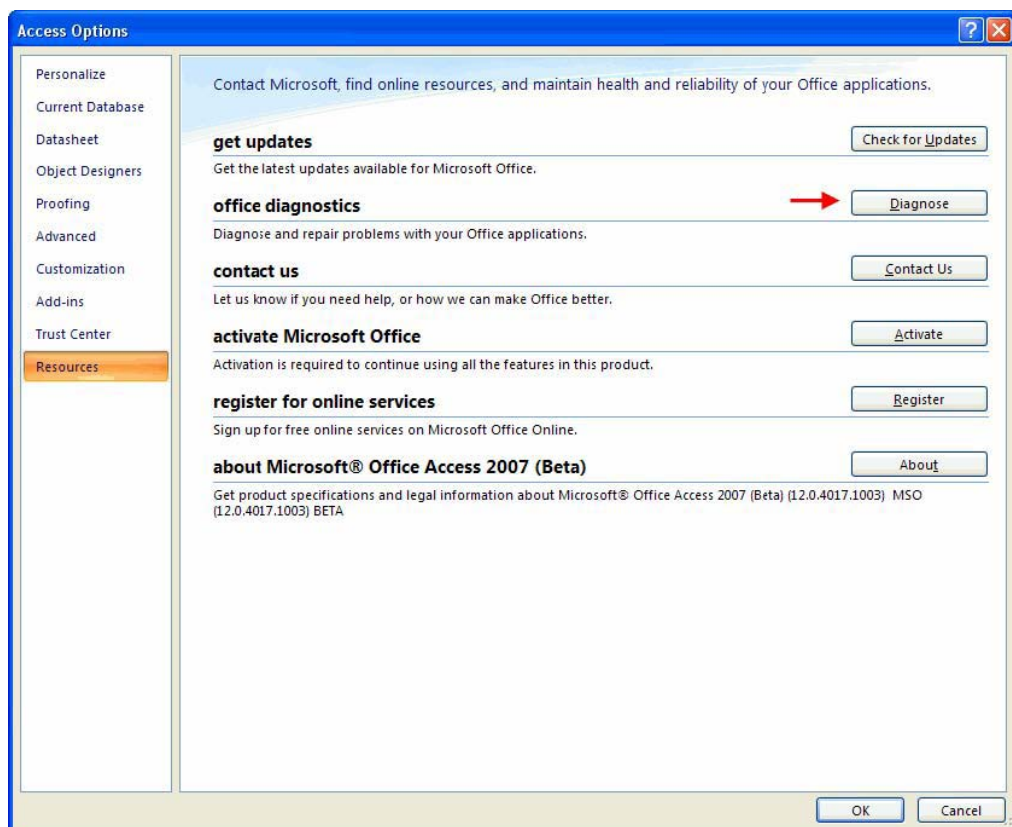
### Using Office Diagnostics

If you continually have problems while using Access, it is possible that the installation of Office on your computer has somehow become corrupted or damaged in some way. Office 2007 has the ability to diagnose and partially repair itself.



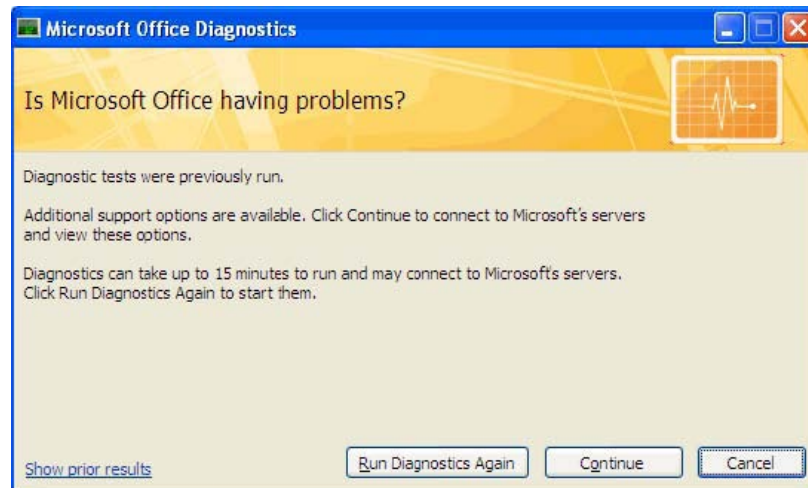
#### ► To diagnose

1. Open any program in the Office Package and click the Options button at the bottom of the Office Menu:

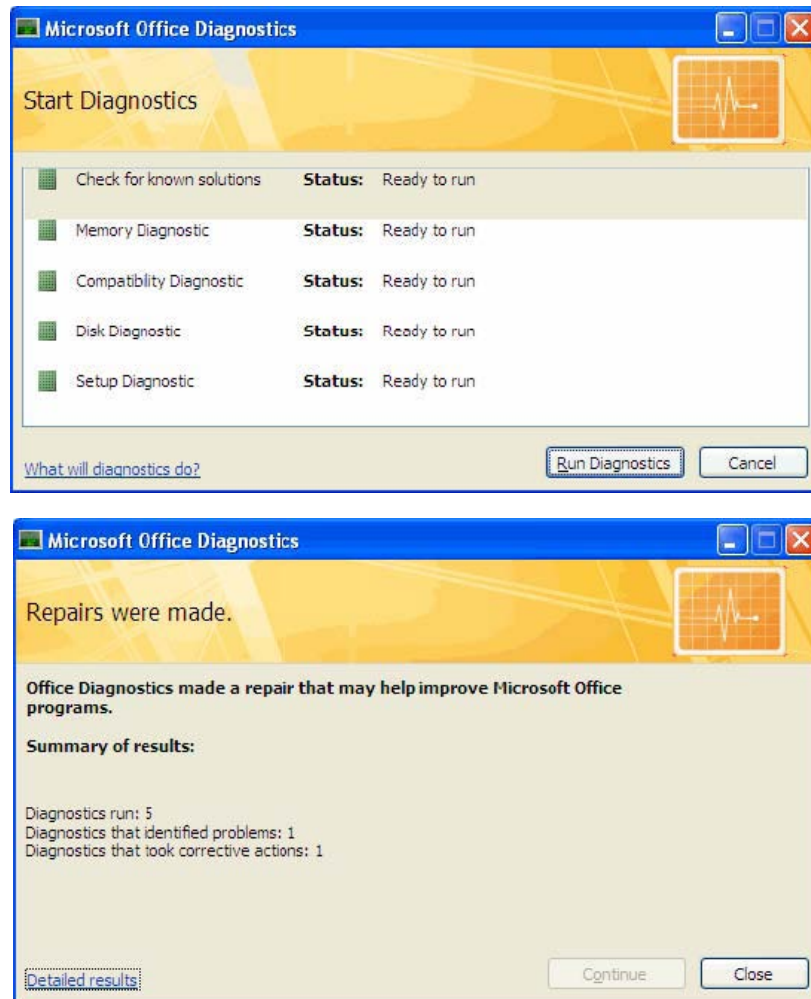


2. Click the Resource tab and then click the Diagnose button:

3. The Office Diagnostics Wizard will appear:

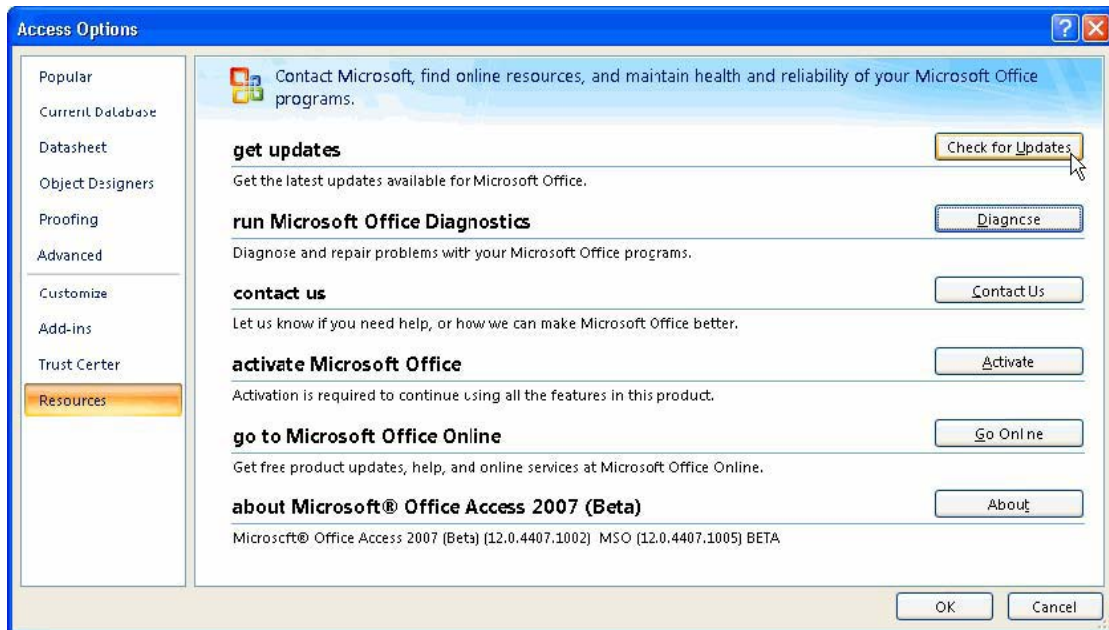


4. Click Continue to begin the diagnostics scan. All of the components of Office that are to be scanned will be listed in the next step:
5. The automated program will perform a number of tests. It will check your hard disk for errors that can cause program corruption, it will check to make sure a security/operational issue has not yet been addressed and download the appropriate fix, and scans any error logs generated by Access after recovering from a crash. You will need a connection to the Internet in order to complete all diagnostic tests. If the diagnostics check cannot find a solution, you may need to reinstall the Office 2007 package on your computer.



## Checking for Updates

Back in the Resource section of the program options is a button to update Office 2007:



Your computer will connect to the Internet and determine if there are any program updates available based on your current installation of Microsoft Office. Updates will be downloaded and installed to your computer. It's a good idea to make sure not to have any other applications open when your computer is applying the new updates. Once the updates have been installed, you will likely need to restart the Office program you were using in order to have the updates take full effect.

### 3.3 Using the Quick Access Toolbar

In the previous lesson, we introduced the new layout changes to Access 2007. In this section, we will learn a little bit more about each part of the new interface and how it works. This lesson will focus on features and customization options available with the Quick Access toolbar, located in the upper left-hand corner of the screen:




#### About the Default Buttons

Access features three default commands in the Quick Access toolbar:

Save 

Saves the most recent changes to the current database file.

Print 

Opens the Print dialogue box allowing you to adjust different print settings.

Undo 

The Undo command will revert most changes made in Access. For example, if you made a formatting change to a form that you were not happy with, click the Undo button to go back one command.

There is a small pull-down arrow beside the Undo button; click this to see a listing of the last few tasks that were performed. Click any task in the list to undo all commands to that point.

### Adding Buttons

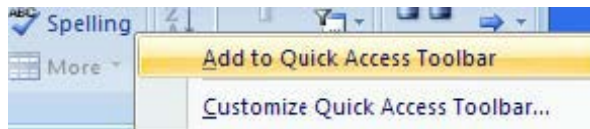
As you become more familiar with Access you might find it handy to have another command quickly available for use. Though the command tabs and ribbon significantly reduce the number of clicks it takes to do something, you might want to have a particular command always available. Access allows you to add the command to the Quick Access toolbar.



For example, some of us have difficulty with spelling. Fortunately, many programs (including Access) feature a spell checking feature. In Access 2007, the spell checking feature is located in the Records section of the Home command tab:

► To add this command to the Quick Access toolbar,

1. Right-click the Spelling command and click 'Add to Quick Access Toolbar.'

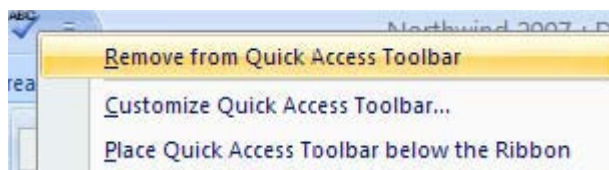


2. The command (denoted by the small 'ABC' icon) will be placed in the Quick Access toolbar:



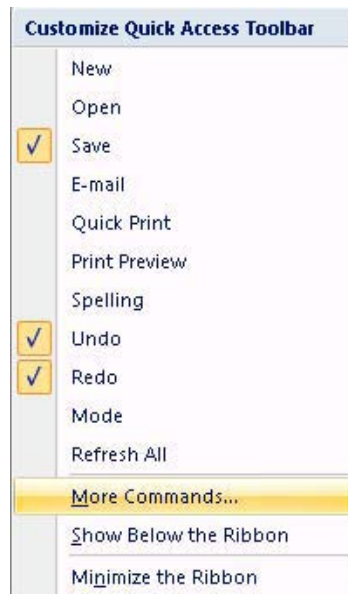
### Removing Buttons

If you no longer use a certain command or your Quick Access toolbar is getting a bit too filled with icons, you can remove them easily at any time.



Right-click on any icon you no longer use and click Remove from Quick Access Toolbar:

## Customizing the Toolbar

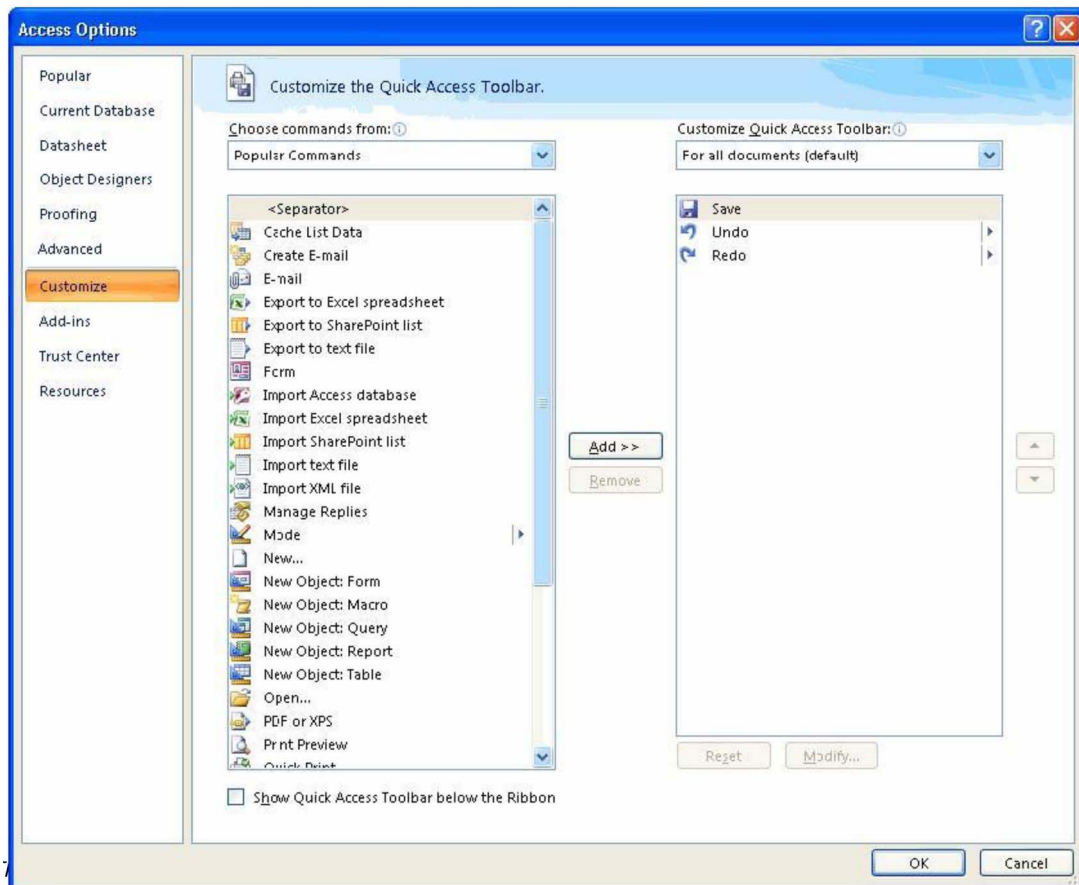


As you gain familiarity with Access (and other Office 2007 programs) you have the ability to customize how the Quick Access toolbar looks all at once versus having to add icons one by one. To do this, click the small pull-down arrow (▾) located on the far right of the Quick Access toolbar and click More Commands:

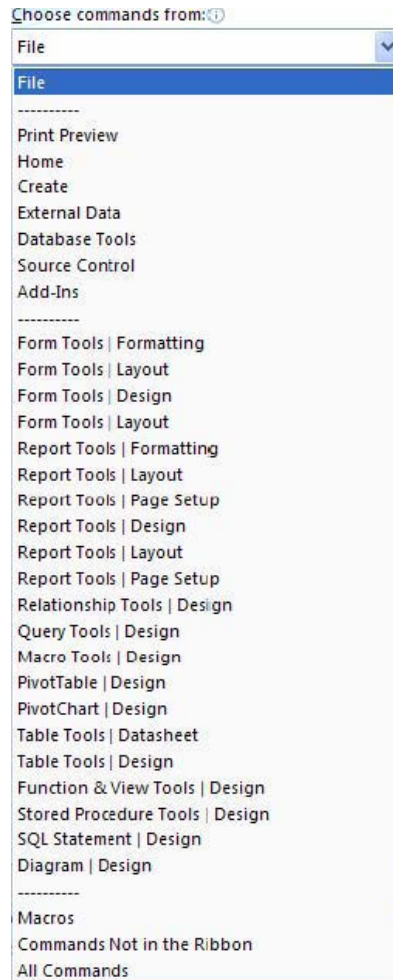
Note that you can click any command listed here to add that command to the toolbar. The commands that are already checked are those on the toolbar; simply click them to remove them.

When you click More Commands, the Customize dialog box (found in the Access Options) appears:

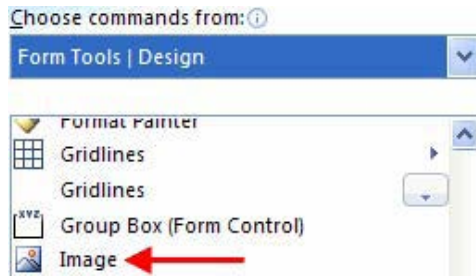
This window gives you the ability to add any of the functionality from any command tab or contextual tab you like to the Quick Access toolbar.



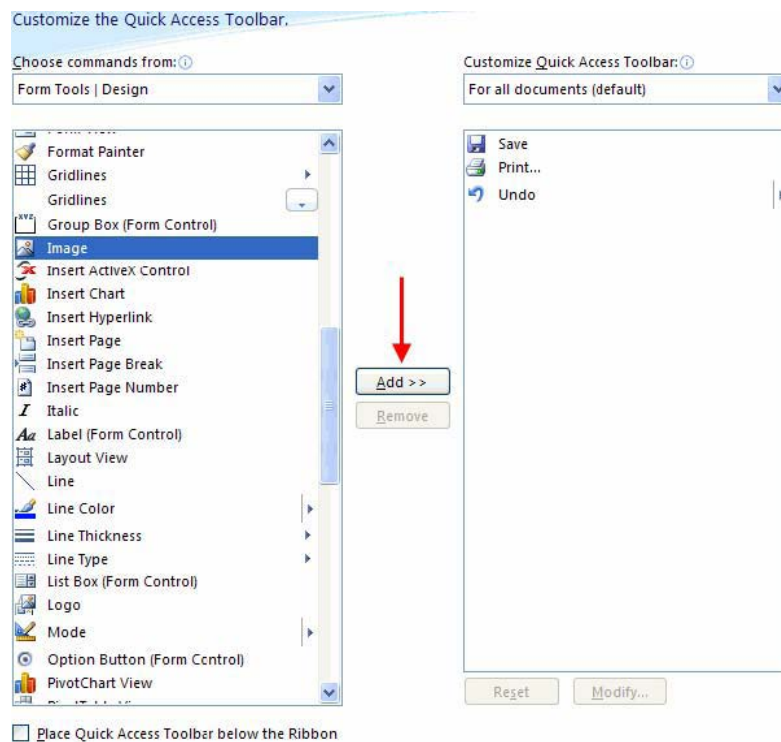
3. Click the pull-down arrow beside the Choose commands from combo box:



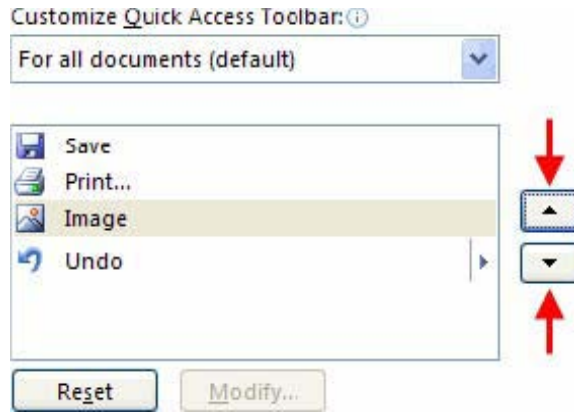
4. The first category (File) is all commands accessible via the Office Menu. The next seven tabs are the main command tabs, the majority of which are visible when working in Access. (Some command tabs might not be visible at the time, depending on what you are doing with your database.) The third section of options are all of the contextual tabs that appear only when you are working with a specific database object. The final section deals with macro commands, other miscellaneous commands, and a listing of every command in Access.
5. Pick a listing from a particular category in order to see the commands it contains. For example, imagine you are going to make heavy use of pictures and diagrams in a database form. To do this, you will need to import each picture one at a time. Therefore, you may find it easier to add the Insert Image icon to the Quick Access toolbar so it is always accessible. Select the Form Tools - Design



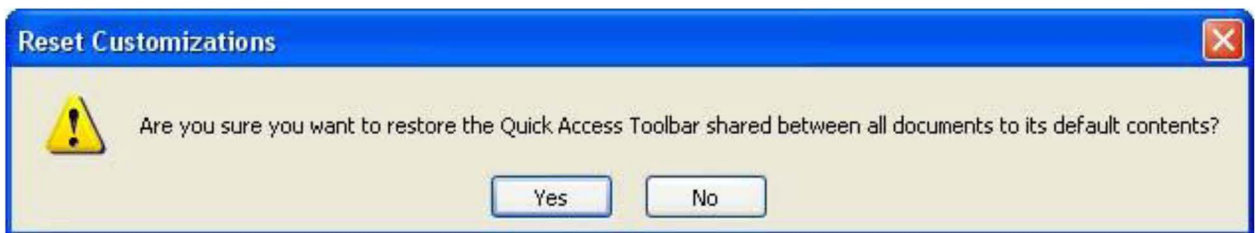
option and then scroll down the list of options until you find Image:



6. Click the Image icon to highlight it and then click the Add >> button located in the middle of the window:
7. This will add the Image tool to the Quick Access toolbar list on the right-hand side of the window. By default, the command is inserted at the bottom of the list (under the Undo command).
8. You can change the order of any icons in the list by selecting an item in the Quick Access toolbar list and then clicking the up and down buttons on the right side of the list. Simply click an item in the list you would like to move up or down and then click the corresponding directional button:
9. Items listed top to bottom will be displayed from left to right in the Quick Access Toolbar. To remove an icon from the list, select the icon and click the Remove button in the middle of the window.



- 10. If at any point you want to return the Quick Access toolbar back to its original configuration, click the Reset button:
- 11. This will remove all icons except for the original three (Save, Print, and Undo).



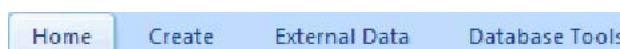
### 3.4 Tour of Ribbons

One of the biggest changes in Access 2007 is the removal of menus. Instead of having a list of menu commands to choose from (including a number of options that are greyed out and not accessible), Access 2007 features a more intuitive control system of tabs. Each tab contains a certain group of commands relevant only to the tab. The commands are listed in the ribbon.

We will learn in this lesson how the ribbon works and some of the tools that are available.

#### About Ribbons

There are two main types of ribbons: general (or command) and contextual. The general ribbons (and corresponding tabs) are always visible when you are viewing a database file in Access:



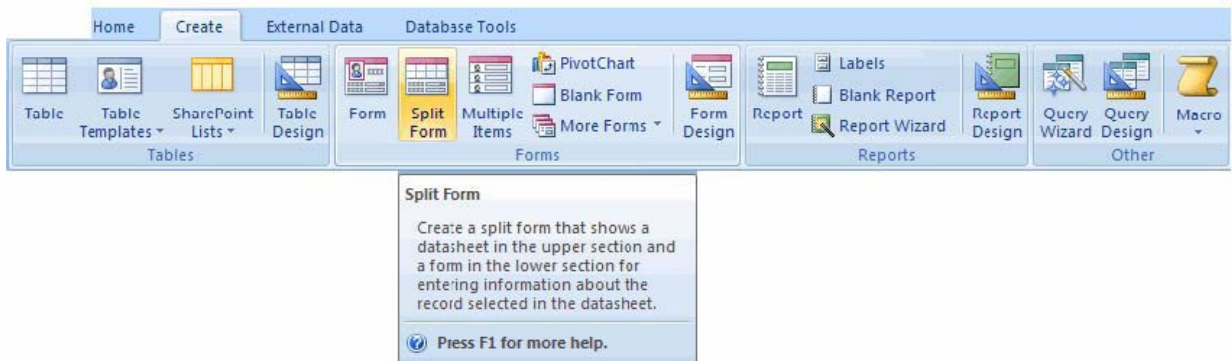
The command tabs listed here include many of the most common commands you will perform in Access. The Home ribbon contains the majority of the most common tasks including the ability to switch views, formatting, and filtering of data. If you want to make a new database object, click the Create tab and select the object you want to make. The External Data command tab gives you all the flexibility to import and export data to and from your database, computer, and network. The Database Tools tab gives you the ability to manage the data in your database, create macros, and view relationships.

Contextual tabs appear only when a certain type of database object is selected (or brought into context). For example, if you are looking at a table in datasheet view, a contextual tab will appear showing you the commands you can perform on the table while only in datasheet view:

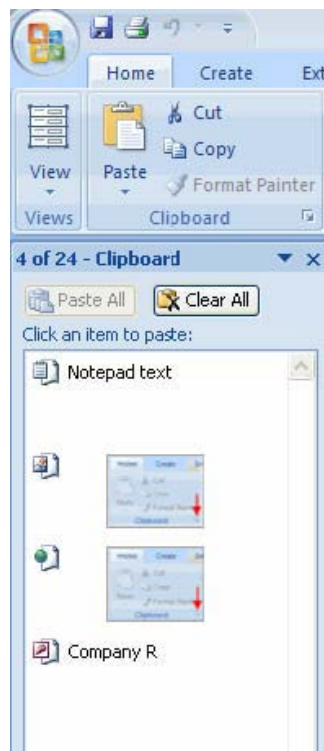


When using a command in the ribbon, simply click it with your mouse. The command will be performed, or the appropriate tool or dialogue box will appear to help you perform the task. If you are unsure what a certain command does, point to it, but do not click it.

After a quick moment a description will appear. This is true for most of the commands:



### Opening Dialogue Boxes from the Ribbon

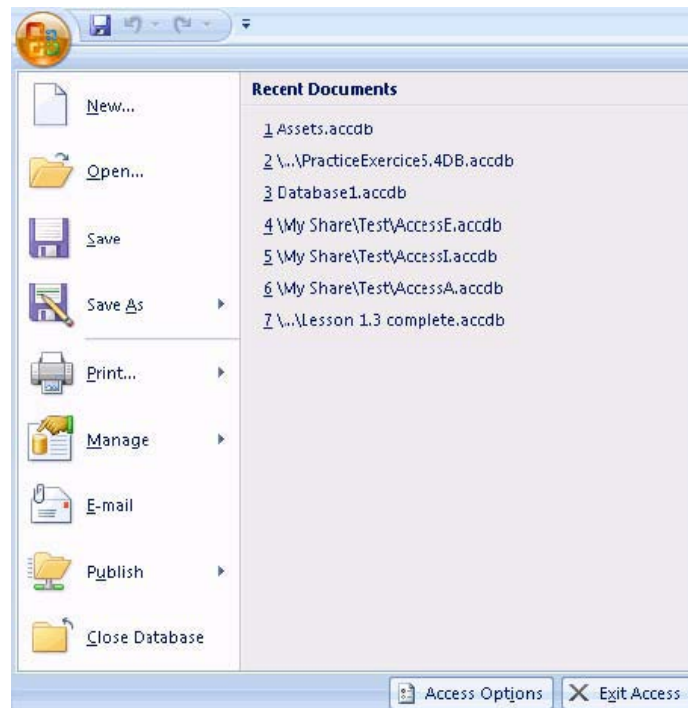


Occasionally you will see a small arrow icon beside the name of a ribbon command category:

Clicking this little icon opens a new dialogue box containing more advanced functionality than is provided by the ribbon alone. In the example above, clicking the Clipboard button opens the Clipboard pane on the left side of the Access window.

As you work with Access and use more features, you will discover more of these options scattered throughout Access.

## About the Office Menu



The Office Menu should be pretty familiar to you now. We have learned that you can open and close files, modify the Access program options, and close Access; all by using the Office Menu. If you have used Access in the past, the Office Menu is very similar in functionality to the File menu in previous versions.

Let's take a look at the commands in the Office menu.

### New



This will close any open database files and open the Getting Started page. Click Blank Database to create a new empty database file.

### Open

Opens a dialogue box allowing you to search your computer or network for a file.

**Save**

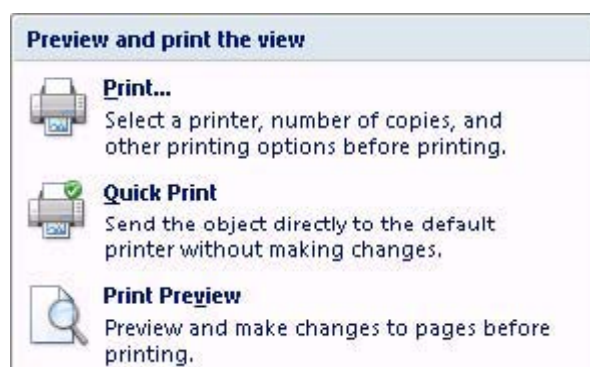
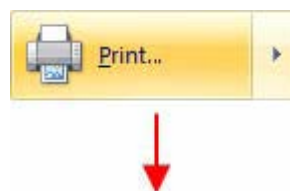
Saves any modifications you have made to the current database object.

**Save As**

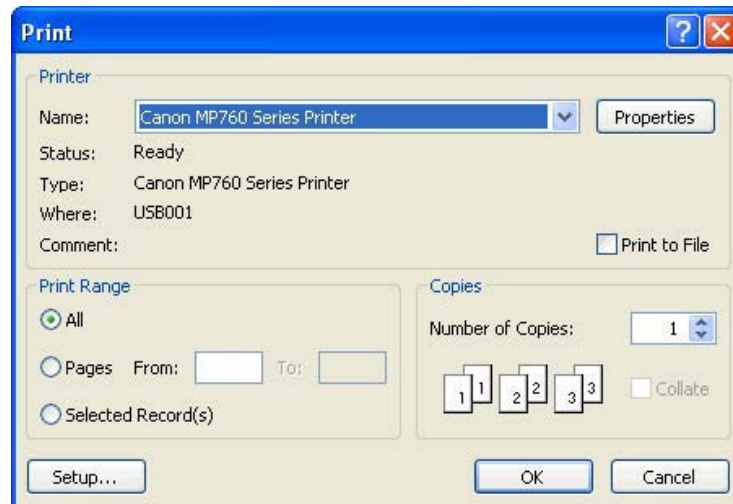
Allows you to save the currently open database object under another name. This is useful if you want to perform a major revision or update to a particular object.

**Print**

The Print button, like the E-mail button, has two different parts. Clicking the Print button directly opens the Print dialogue box:



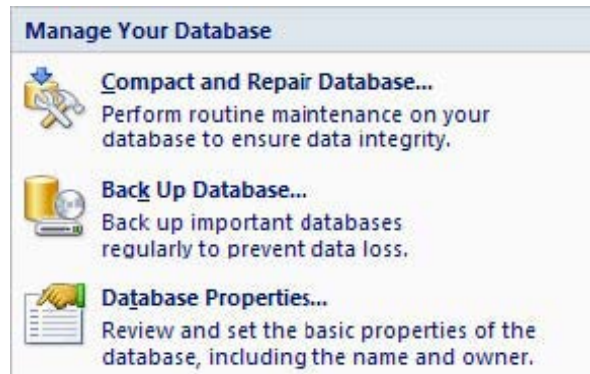
Clicking the right-facing arrow displays a few more options on the right-hand side of the Office Menu:



Print does the same thing as clicking the Print command in the Office menu, while Quick Print sends the current file directly to the printer to be printed using the default options. Print Preview lets you view the current database object as it would look if printed on a piece of paper. We will explore more printing options later in this manual.

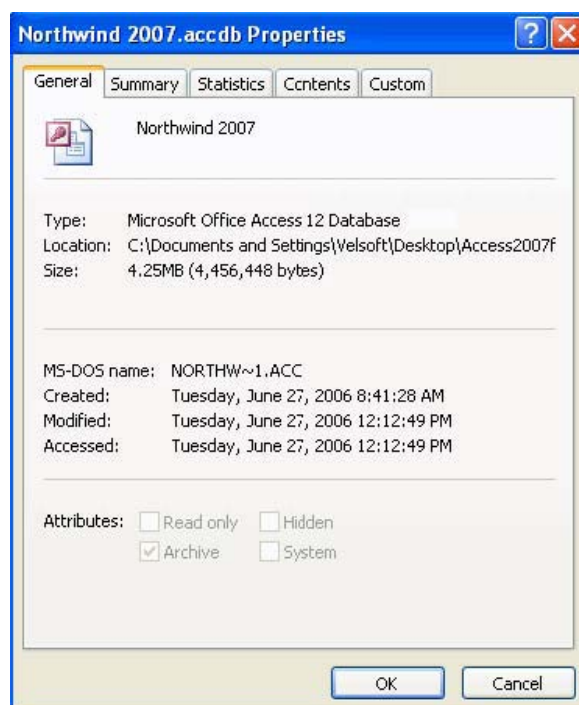
## Manage

This menu option gives you three choices:



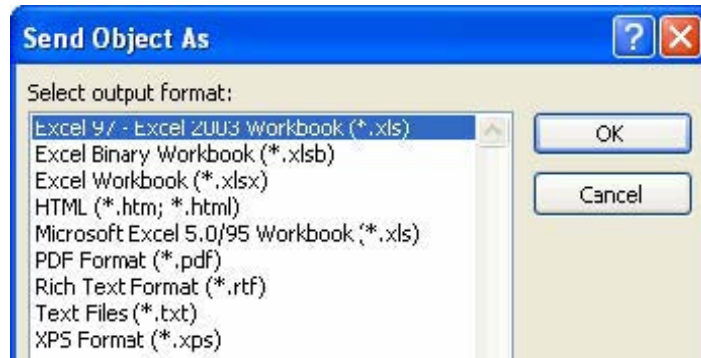
Compact and Repair Database is useful if you are planning to send the database to another person so they can work on it. This command checks the file for errors and compresses the file size a bit by eliminating wasted space. (If you have ever defragmented a hard drive before, the principle is the same.)

Back Up Database makes a copy of your entire database file for safe keeping.



Database Properties allows you to modify and view characteristics specific to your database:

**E-mail**



Clicking the e-mail link will open the Send Object As dialogue box:

Click the file type you would like to e-mail the current object as and click OK. This will launch your default e-mail program.

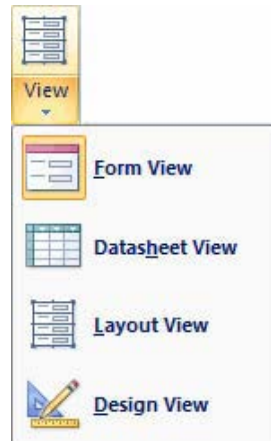
**Close Database**

Closes the current database file.

**The Home Ribbon**

In the following lessons we will explore what commands are included in each command tab and their function. We will start with the Home command tab and ribbon, which contains most of the commonly used commands for databases and working with data using Access. Remember, this is just an overview; don't worry if you don't understand what particular commands do. This is just so you know where to find a command when we begin discussing it.



**Views**

1. Click the Views command to cycle through the different views available for each object. (The type of views available will differ depending on the object that is currently open.)
2. You can also click the small down arrow underneath the word View to see all of the available views:

**Clipboard**

The Clipboard is a special part of the memory of your computer. It is designed to hold an object in temporary memory until it is either placed somewhere else or copied over when a new item enters memory. Before the newer versions of the Windows operating system, a computer could only hold one item at a time in memory. The Office packages have expanded this to a full twenty-four objects whether it is text, spreadsheet data, pictures, or some other piece of data. Items are placed on the clipboard either by selecting some text or object and pressing Ctrl + C on your keyboard. Ctrl + V will paste the object to a new location.



Access 2007 gives you full control of the clipboard on your computer. Select an item and use either the Cut or Copy command, followed by the Paste command. The other command in the Clipboard section of the ribbon (marked Format Painter) is only applicable when designing forms or reports and will be covered later.

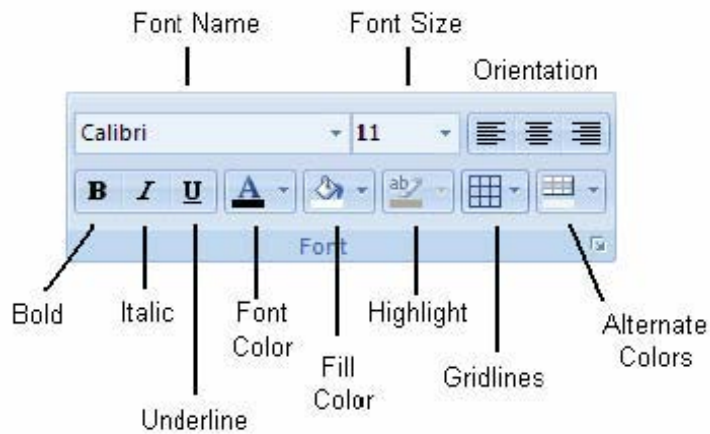
1. Click the Clipboard button (circled in red above) to expand the clipboard and its contents:



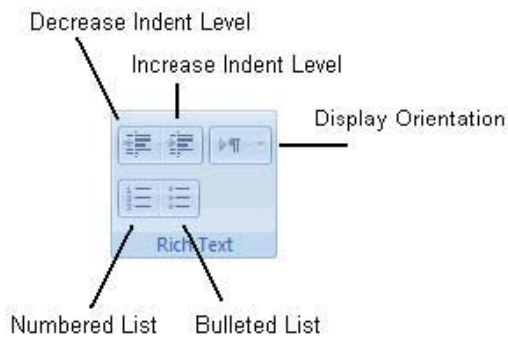
2. You can empty the clipboard at any time by clicking the Clear All button. Or, you can delete individual items by right-clicking on an item and selecting Delete.

**Font**

The Font section of the Home ribbon contains all the commands you need to modify how a font looks:



Any of the options that have a small pull-down arrow contain more options than a simple toggle on and off; click the pull-down arrow to see all available options. You can also use the button in the lower right-hand corner to expand different formatting options for a particular database object.

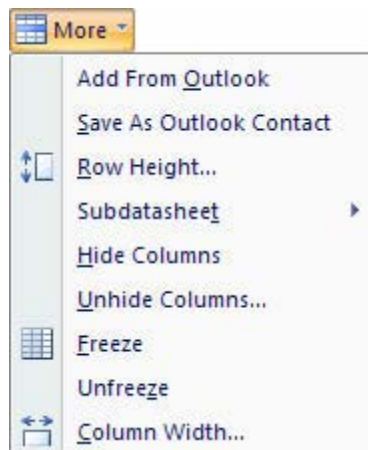


**Rich Text**

Access 2007 allows you to take certain text fields further with the addition of Rich Text options:

**Records**

The Records section of the Home ribbon deals with basic data management:



The Refresh All command is designed to re-retrieve all the information from the database file. This option becomes particularly useful if your database includes any external data sources (explained later in this manual). If you only want to refresh the data for the current object, click the small pull-down arrow beside the Refresh All command and select Refresh.

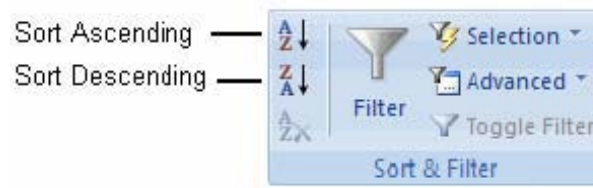
The other commands will generate a new record in the object, save any record changes, delete a record, apply a calculation field like sum or average, and check the spelling of the current object.

Clicking the pull-down arrow beside the More command will show a small menu of more commands that can be performed on the current object:

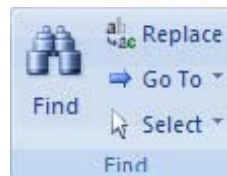
We will explore some of these commands later in this manual.

**Sort and Filter**

The Sort & Filter section of the Home ribbon will apply some sort of organizational method to a database object:



For example, if you wanted to sort a list of names alphabetically, simply click the column header to select the entire column of names and then click the Sort Ascending command. (We will cover how to perform operations on a table of data later in this manual.)



**Find**

If your database should grow substantially in size some day, finding a particular value by hand quickly becomes impractical. Access features a Find command to track down the value you are looking for:

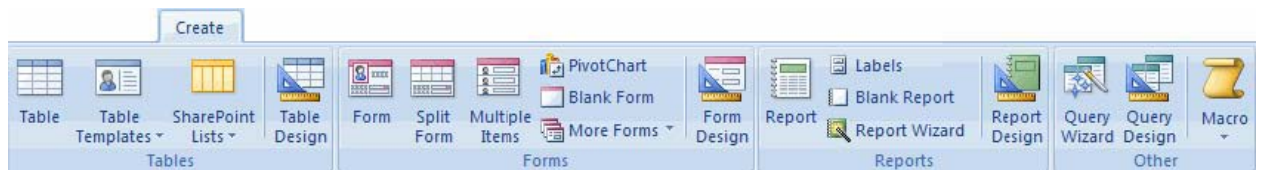
Simply enter the search criteria you are looking for and Access will search the current database object to retrieve the information you are looking for.

As an addition to the Find command, Access can also replace certain values based on search criteria. For example, if you misspelled a place name or if someone’s last name has changed, you can use the Replace command to find all instances of a value and replace it with something else.

Use the Go To command to browse the various records that meet your search criteria. You also have the ability to select an entire row of data containing a ‘found’ value or select the entire object containing the found value(s).

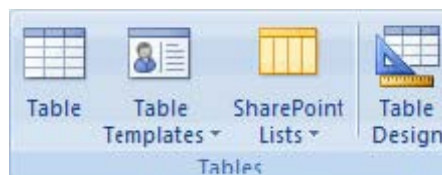
**Create Ribbon**

We continue in this section with our exploration of the next main ribbon, the Create Ribbon. The Create ribbon is used to make new database objects:



**Tables**

Tables are the main objects used in databases. (Without tables, and thus without data, you don’t have much of a database!) We learned in Section 1 of this manual that a table contains one or more records (or rows of data) and a record contains one or more fields. So, use this section of the ribbon to create the tables you need in order to store the data for your database.

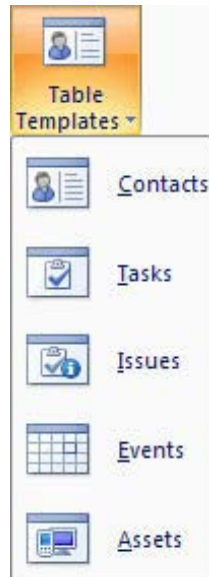


Let’s look at the different options in this section.

## Table

This will open a new empty table in Datasheet view. You can directly enter data into the field this way or enter Design view to modify the structure of the table by hand.

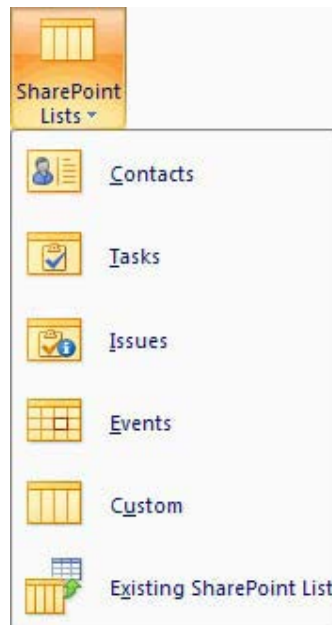
## Table Templates



Use the small pull-down arrow to select a table template from the list of options:

A new table template opens in Datasheet view with a number of pre-defined columns. You can start entering data into the table right away.

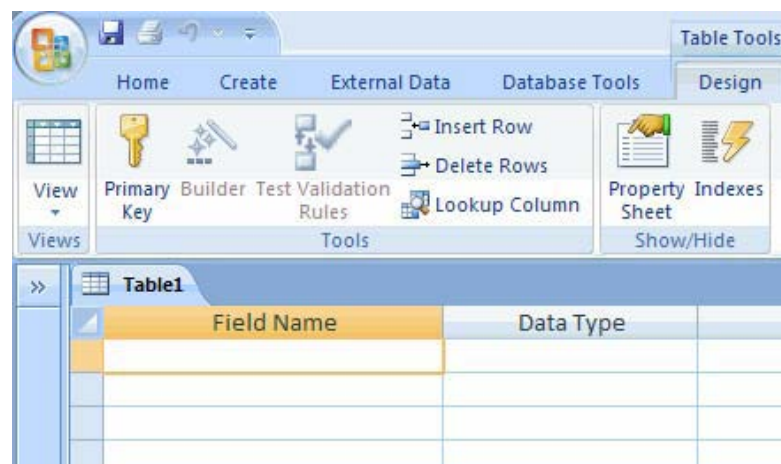
**SharePoint Lists**



SharePoint Lists are a bit beyond the scope of this manual. Essentially they are tables of data that can be linked to another table stored on a SharePoint server across the room or across the world.

**Table Design**

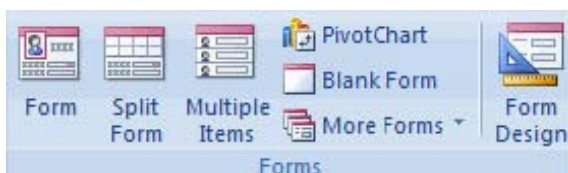
Clicking the Table Design command opens a new empty table in Design View:



Here you can begin the custom construction of the table as you need it. We will explore more of the functionality of table Design view later in this manual.

## **Forms**

Forms are a way of entering data into a table one record at a time. Forms in Access are comparable to paper forms you would fill out in an office. With a paper form, there is a space for each piece of data required, and once the form is filled out, it will get filed somewhere. The same is true in Access, as you need to have at least one table of data, query, or report in order to make proper use of a form. Use the commands in the Forms section of the Home ribbon to perform different form actions:



## **Form**

Use this command to create a new form based on the last highlighted object in the Navigation Pane. Each field in the object will be made into a new field in the new form. (We will explore the use of forms later in this manual.)

### **Split Form**

A split form is a new feature of Access 2007. It allows you to enter information into a form while you view the table, query, or report data.

### **Multiple Items**

This command creates a special kind of form that lets you view more than one record at a time. Multiple item forms are beyond the scope of this manual but are very useful in certain situations.

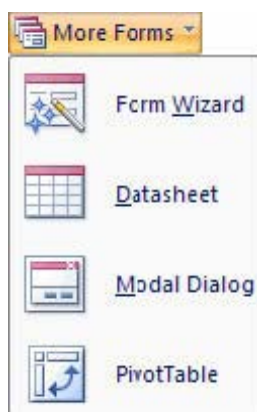
### **PivotChart**

A PivotChart is a powerful tool used to compare different data values in a database. Though their use is beyond the scope of this manual, their functionality is easy: simply drag two or more fields into the chart for an instant graphical comparison. Add more values and adjust their positions to 'pivot' the chart results to your liking.

### **Blank Form**

Use this command to create a new empty form.

### **More Forms**

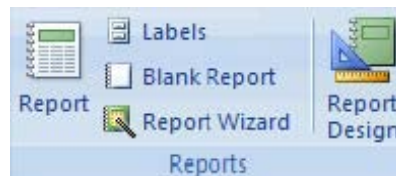


This command features more advanced commands relevant to the use of forms, including the Form Wizard, used to help you create a form without having to build it manually:

### **Form Design**

Clicking the Form Design command opens a new empty form in Design view. You can begin constructing a new form right away.

## **Reports**



Reports are primarily used to summarize the data returned by a query. Reports can also be used to create a complete table contents listing suitable for printing.

### **Report**

Clicking the Report button creates a very simple report based on the last highlighted object in the Navigation Pane. We will explore the use of reports later in this manual.

### **Labels**

There is a good chance most of the databases you will use will have some sort of contact table containing names and addresses. Access features the ability to create a mailing list based on the data in a table.

### **Blank Report**

This command opens an empty report.

### **Report Wizard**

This command will walk you through the steps of creating a report based on another database object. The wizard will walk you through the placement of fields as well as a style and layout that works for you.

### **Report Design**

This command will open a new blank report in Design View where you can start to manually build a form right away.

### **Other**

The Other section of the Create ribbon is devoted to the construction of queries and macros:



### **Query Wizard**

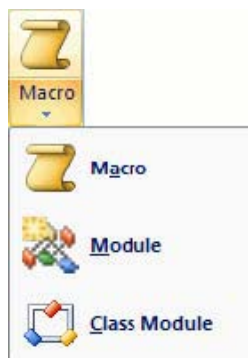
The Query Wizard will walk you through the steps of making a query without requiring any knowledge of database code like SQL (Structured Query Language). Simply pick the fields you want to display in your query and let Access do the rest.

### **Query Design**

This command will open a new empty query in Design view where you can stipulate with more precision how you want to construct your query.

### Macro

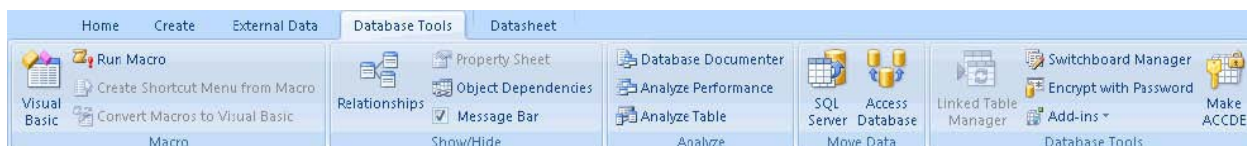
Macros are a set of instructions that you can tell Access to perform. For example, if you are performing a fairly large task with many steps frequently in Access, you can design a macro. It works like a script given to a performer; they read the script and deliver the performance the same way each time.



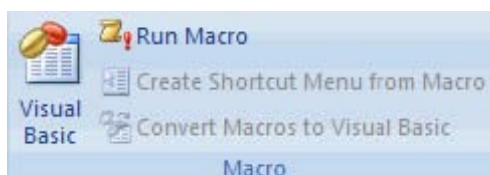
The pull-down arrow under the Macro command will reveal some of the more advanced functionality of Access. Though their use is beyond the scope of this manual, these commands are designed for database programmers to have Access perform more advanced program functionality.

### Database Tools Ribbon

The Database Tools ribbon is the last of the four main command ribbons. It contains most of the advanced and background commands used on an established database. We will explore the basics of this ribbon's functionality in this lesson.



### Macro



We defined a macro earlier as a set of instructions you can save to use again and again on a database. A macro can be used to encompass nearly every command in Access, as well as extra functionality defined by a programmer.

### **Visual Basic**

This command launches the Visual Basic editor. This program is used to develop VBA code (Visual Basic for Applications) designed to do background operations in a database.

### **Run Macro**

This command will launch the Run Macro dialogue box. Choose a macro from the combo box and click OK.

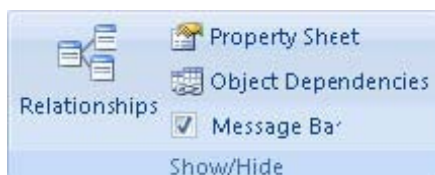
### **Create Shortcut Menu from Macro**

Certain macros can be used to modify the Access interface if certain conditions are met; use this command to make a shortcut to the macro.

### **Convert Macros to Visual Basic**

Unless you plan to become a database developer, nearly every macro you create will be made by having Access follow the commands as you execute them. Should you need to modify a macro you have created on a finer scale, use this command to convert the macro to VBA code and then use the Visual Basic editor to modify the code.

### **Show/Hide**



The Show/Hide section of the ribbon is used to display some of the different characteristics that a database has:

### **Relationships**

Nearly every database that contains multiple tables also includes a relationship between the information contained in the database file. For example, if you work at a department store, each item likely has some department identification number associated with it (1, 2, 3, etc.). In the store database there is another table that lists the corresponding department name with a number (1 = ladies wear, 2 = furniture, 3 = kitchen & bath, etc.). The table of items and the table of departments share a relationship in that the values of one are related to the values of another. We will explore relationships later in this manual.

**Property Sheet**

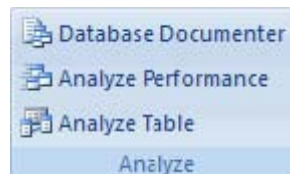
Click this button to show the properties of any currently highlighted database object in the Navigation Pane.

**Object Dependencies**

As you develop more relationships in your database and build more forms, reports, and queries, you will develop a large number of dependencies. That is, one object, such as a query, depends on many others in order to fulfil its job. Click this button to view these dependencies.

**Message Bar**

The message bar is a feature you can enable or disable to see different security alerts while using Access.

**Analyze**

The Analyze section of the ribbon is used to examine how your database is built and how well it will perform. Database performance, as well as the terminology and methodology behind it, is used mainly by database engineers. However, Access makes it easy to perform some optimizations to your data without you needing a PhD in computer science!

### **Database Documenter**

The Database Documenter tool is used to thoroughly list every feature and property of a database object or group of objects.

### **Analyze Performance**

This command is a special part of Access that can tell you where you may be able to make improvements to the design of your database. For example, if you end up with duplicate tables or a table, the analyzer can find these and suggest some optimizations to increase the performance of your database.

### **Analyze Table**

This command launches the Table Analyzer Wizard. This tool works like the Analyze Performance command, but on a finer scale and one table at a time.

### **Move Data**



The Move Data section of the ribbon is used to perform large scale move and split operations to a database. These commands are beyond the scope of this manual and should only be performed by IT professionals.

### **SQL Server**

This will move certain objects or an entire database to an external Microsoft SQL Server.

### **Access Database**

In certain corporate situations, it may be useful to split up your database across two or more locations such that the tables are situated in one location and other database objects are in other locations. This command will open a wizard that will help you do just that.

## Database Tools



The last section of the Database Tools ribbon deals with other miscellaneous database functions.

### **Linked Table Manager**

This command is used to perform certain operations pertaining to any linked tables in your database.

### **Switchboard Manager**

A switchboard is a special type of form used by Access. A switchboard is usually used as the first object someone sees when they open a database file. Essentially it provides a graphical, easy-to-use way to perform certain functionality in a database. Switchboards are a bit advanced for this manual, but as you (and others) continue working with Access you may find it to be a big timesaver.

### **Encrypt with Password**

Use this command to apply a password to your database. The password is only needed to launch the file (and to remove the password). (Encryption of a database was covered in Lesson 1.3.)

### **Add-Ins**

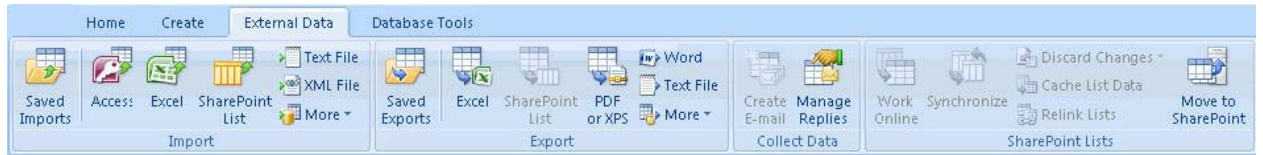
An add-in is a special type of third-party program or VBA code that is used to provide extra or specific functionality to the Access interface. If you are familiar with plug-ins used in an Internet browser, the principle is essentially the same.

### **Make ACCDE**

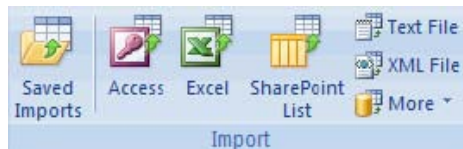
Access 2007 features a new type of file extension, \*.ACCDB (ACCess DataBase), which replaces the old \*.MDB file extension. The new file format is needed to make use of the new functionality provided by Access 2007. ACCDE stands for ACCess Database Execution. It is a special type of file extension that denotes the database file is labelled 'execute only;' that is, it has no modifiable VBA code and will only perform the actions it has been designed specifically to do. ACCDE replaces the old \*.MDE extension.

### External Data Ribbon

If you are just starting out with Access, chances are the majority of the databases you will use will be contained on a single machine. You will also likely enter most of the data by hand. This is fine for small databases, but Access gives you the ability to import data from nearly any source and from a wide variety of programs. In this lesson we will learn a little bit more about the External Data ribbon.



### Import



The Import section allows you to bring in data from many different sources, including other Microsoft Office programs.

**Saved Imports**

Allows you to retrieve information for a specific source many times. For example, if you extract information from a Microsoft Excel spreadsheet on a regular basis, you can choose to save the import operation so you don't need to set up the same import over and over again.

**Access**

This command lets you import data from another Access file or link to the data contained in a file.

**Excel**

The Excel command lets you import data from an Excel file or link to the data contained in a file.

**SharePoint List**

Use this command to import data from a SharePoint list or link to the data contained in the list.

**Text File**

If you have a large amount of data that is in an organized structure, you can import that data directly into your database file and have Access format it for you.

**XML File**

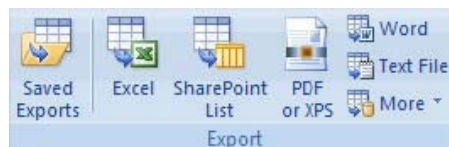
Import the data from an XML (Extensible Mark-Up Language) file directly into a table in your database.

**More**

Access 2007 features the ability to import data from other database programs. Click the appropriate file type command to start importing that particular type of file:



## Export



In addition to being able to import data from a number of sources, Access can also export data to several different sources.

### Saved Exports

If you frequently export data to a particular location or program, you can save the export operation for later use, thereby eliminating having to set up the export each time.

### Excel

Export the data contained in an object to an Excel spreadsheet.

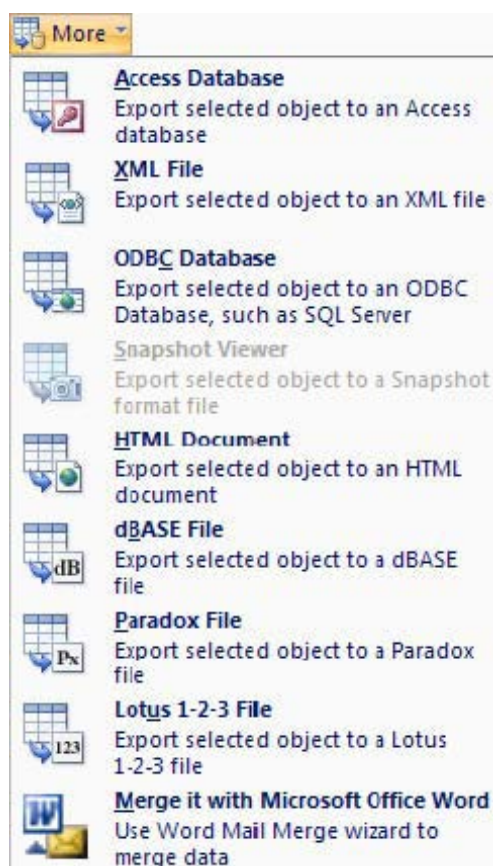
### SharePoint List

Export the data in a database object to a central SharePoint location.

### **PDF or XPS**

This option enables the contents of a database object to be distributed to others as a PDF or XPS files. This means you can see database objects without having the need for Access to be installed in every location. (This option may not be available if you have not downloaded and installed the PDF add-in from the Microsoft Web site.)

### **Word**



Access allows you to export the contents of a database object to Rich Text Format (RTF) for use in Microsoft Word and other word processing applications.

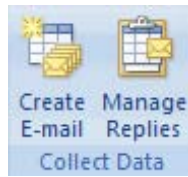
### **Text File**

You can export the data contents from a database object to a plain text file that is usable on virtually any computing platform.

### **More**

Access 2007 allows you to export to many other file types and locations through the use of the More command:

## Collect Data



One of the more powerful and convenient data collection services is the Collect Data portion of the External Data ribbon. Though the use of these commands is beyond the scope of this manual, their function is certainly worthwhile mentioning.

### **Create E-Mail**

Use this command to send a self-contained form as an attachment in an e-mail. The recipient can enter some data into the form and then e-mail it back to you.

### **Manage Replies**

This command is used to sort and store the incoming e-mail that you had distributed.

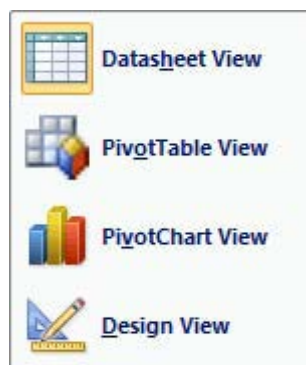
### 3.5 Viewing Data

We have used Access so far in a simple way, usually opening only one or two objects at a time. In this lesson we will learn a bit more about the different views available in Access as well as some other viewing management options.

#### Using the View Menu

We have made use of the View menu throughout this manual. The View menu is located in a few different ribbons throughout Access and is different for each object you open.

#### Table

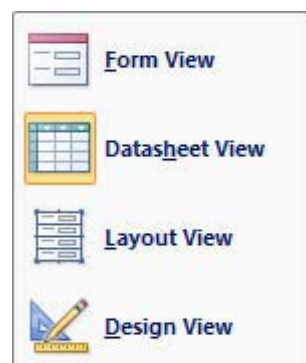


Datasheet view displays all data in a table in a columnar view.

PivotTable and PivotChart views are beyond the scope of this manual, but essentially they allow you to quickly and graphically compare the values in one field with another.

Design view lets you modify the properties of a table to make it contain and display the data you need.

#### Form



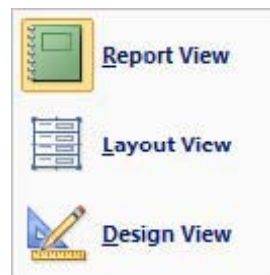
Form view lets you view the form in such a way that you can enter data one record at a time into a table.

Datasheet view is a way of showing you the table that the form references.

Layout view is an intermediate step between Form view and Design view. It lets you adjust the location of objects in a form while still being able to see the data it contains.

Design view lets you modify the look and feel of a form as well as add different controls to perform actions.

## **Report**



Report view displays the contents of the report in a manner suitable for printing or presenting.

Layout view is an intermediate step between Report view and Design view. It lets you adjust the location of objects in a report while still being able to see the data it contains.

Design view lets you modify the look and feel of a report as well as add different controls to display data or perform actions.

## **Query**



Datasheet view displays the results of a query in a view similar to a table.

PivotTable and PivotChart views are beyond the scope of this manual, but they allow you to quickly and graphically compare the values in one field with another.

SQL (Structured Query Language) view is a way of viewing and modifying the background 'code' used to make a query. SQL editing is beyond the scope of this manual.

Design view lets you add and remove fields from the search as well as add criteria to retrieve more specific results.

### Using the View Icons



The View menu has a cousin present in the very bottom right-hand corner of the Access window. For example, viewing a table in Datasheet view will show the following buttons:

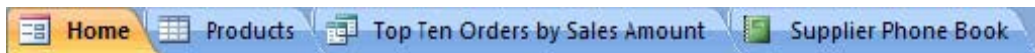


These icons are exactly the same as the corresponding items in the View command. The view currently in use is highlighted in orange. If you hover your mouse over an icon to see its description:

Click any of the icons to switch to that view.

### Using the Tabs

In previous versions of Access, opening a new database object meant opening a new window. After only a few objects, your screen would be pretty full and finding objects 'hidden' under different windows was frustrating. Access 2007 eliminates



that clutter. Each database object you open opens a new tab:



Simply click a tab to view that object.

If you happen to have many objects open at once, arrows will appear on either side of the list of tabs allowing you to scroll back and forth through the opened objects:

### Closing Individual Tabs

To close a database object, highlight its name in the list of tabs and then click the close button underneath the ribbon:



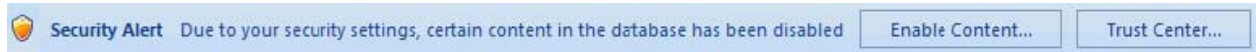
## 3.6 The Trust Center

The terms computer security, identity theft, and privacy are being used more and more all the time. There are a few bad apples out there that like to create viruses and spyware for the purpose of disrupting day-to-day business. The Microsoft Windows family of operating systems, as well as a number of third-party developers, work hard every day to keep your private and sensitive data safe. So to does the Office 2007 suite.

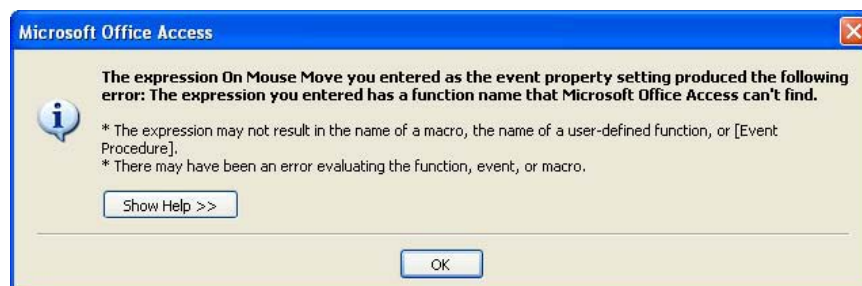
In this lesson we will explore some of the measures taken by Access 2007 to keep your computer and yourself from being a victim of an attack or being disrupted while you work.

### Warnings You May See when Opening a Database

If you recall the last Step-By-Step exercise, we encountered a warning stating that Access has prevented a file from being opened because of the security settings that have been enabled on your computer:



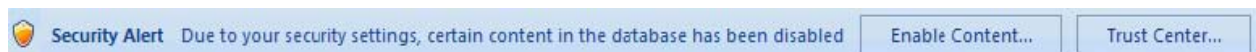
You might also run into other warnings that state Access cannot perform a certain action because a non-standard operation was encountered or some part of the database file seems to be missing. It is possible that the following warning might appear not because a problem was detected, but because a certain section of the database might not be fully constructed:



These warnings are designed to protect you, not scare you. Should you encounter messages like the ones above, think why it may have occurred. If you received the file from someone else, tell them you have encountered a problem before opening the file. If you are unsure about the file, contact your organization's IT department for help; they may be able to diagnose your problem and provide a solution. It may even be that your security settings are a bit too high for this application (which is not always a bad thing). We will discuss what to do in situations like this in this lesson.

### Enabling Content

If you are sure the file you are opening is safe, or you trust the person it came from, simply click the Enable Content button in the bar that appears under the ribbon:



Doing so will show the Trust In Office dialogue box:



In the picture above, Access gave you a warning because it could not identify who made the file. This does not necessarily mean that it came from an untrustworthy source; perhaps whoever made the file did not bother to apply a digital signature (described in the next section) or security certificate. If you are sure the content is safe, simply click the Enable this content radio button and then click OK. The file will then open normally.

### **About Digital Signatures**

Digital signatures serve the same purpose as a written signature or an embossed certificate: they identify who someone or what something is, and no two individual signatures are exactly the same. The same is true with digital signatures. Though the topic of signature application is a bit beyond the scope of this manual, the concept is fairly simple.

If you are part of a corporate network that sends sensitive trade secrets via electronic means, you can apply digital signatures to the files that are created. If you use Access 2007 to organize supplier information, you can safely send information to another individual in your organization. Their computer will hold what is called a digital certificate which is designed to 'decode' your signature. If your signature decodes properly, no problem – the other user will then make use of the supplier information. However if your signature does not decode properly, the other user can choose to block content from you (or perhaps someone masquerading as you!).

You can view and modify different aspects of Access' security via the Microsoft Office Access Trust Centre (described later in this lesson).

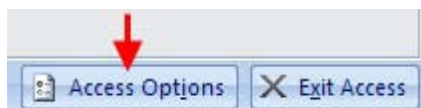
**About Trusted Locations**

Imagine you are an employee of a large company and you send and receive files every day. Access has been warning you that some files may contain a possible security threat because the sender could not be verified. However, you know the sender and know that they can be trusted. Therefore, instead of being warned every time you try to open a file from them (which can quickly become annoying), you can tell Access that files from a certain location can always be trusted.

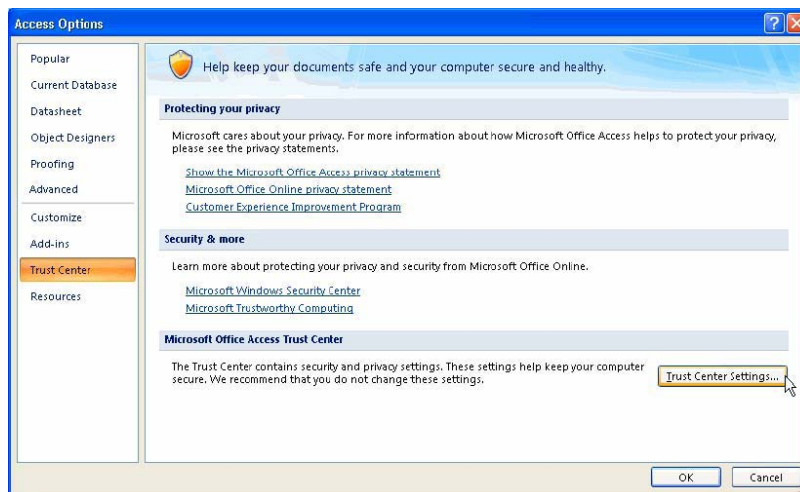
Trusted locations can include any location on your computer including shared folders, any other computer on your network, a server on your network, or some external data source across town or across the world!

**Opening the Trust Center**

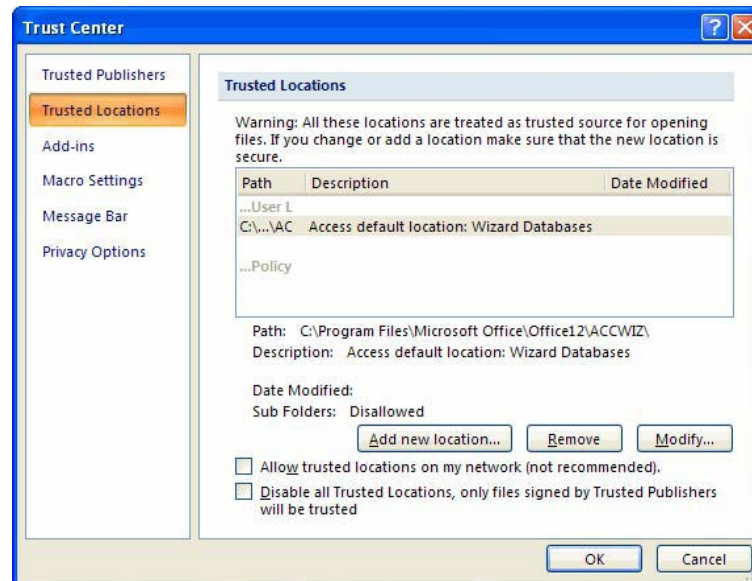
All of the security features we have mentioned thus far are accessible through the Trust Centre. Let's quickly explore the different sections and options available in each. To open the Trust Centre.



1. Click Office Menu Access Options (located beside the Exit Access button):



2. Down the left-hand side of the Access options window is the link to Trust Centre. Click the link, and then click the Trust Centre Settings button:



3. The Trust Centre window will then appear, giving you six different categories of settings:

### **Trusted Publishers**

This pane will show you the security certificates of different individuals or organizations you trust.

### **Trusted Locations**

This pane allows you to add, edit, or modify different locations that contain content you can trust.

### **Add-ins**

Add-ins are third party programs or code that are designed to perform a specific task to your database. Add-ins have the potential to cause a lot of trouble and ruin the functionality of a database (such as deleting all of the data) if they contain malicious code. This pane allows you to modify how Access will use any add-ins.

(If you are familiar with a third party plug-in for a web browsing program, such as Adobe Acrobat Reader, the principle is essentially the same.)

### **Macros**

Macros are a group of commands that can be executed all at once in order to perform some action on your database. But because macros can be constructed with special database code, they too can cause undesirable effects if they are from a bad source. Use this option to modify macro security settings.

### **Message Bar**

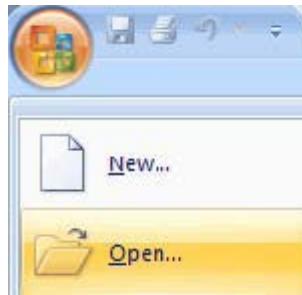
The Message Bar is set by default to prompt you before opening potentially unsafe content. You can turn the Message Bar on or off using this pane.

### **Privacy Options**

Access (and other programs in the Office suite) can automatically download new content for you, show featured links on Office Online, and provides background access to help diagnose and fix problems. If you would prefer to not see this content, you can modify settings in this pane to disable the content.

You also have the ability to translate certain files based on the languages installed with your operating system, and retrieve reference and research material on the Internet via the Privacy Options pane.

### Assigning a Password to your Database

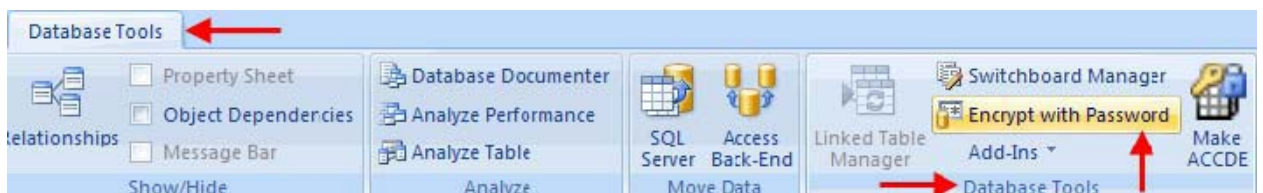


If you would rather not bother with more advanced security features but still want to have some protection, you can assign a password to encrypt the database. To set a password, a file must first be opened for exclusive use. To do so,

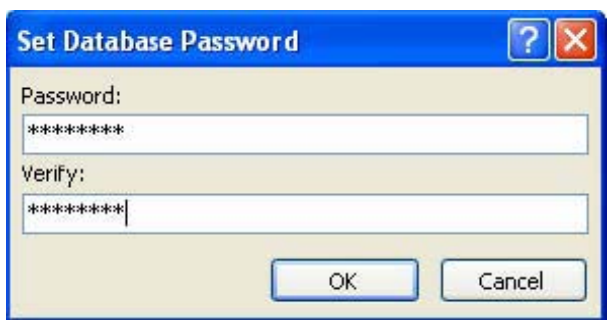
1. Close any open databases
2. Click Office Menu Open:
3. Browse to the database file you wish to open



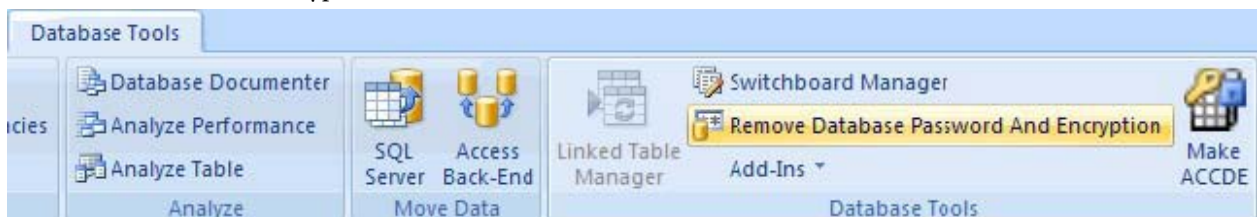
4. Instead of clicking Open, click the small pull-down arrow attached to the Open button and click Open Exclusive:
5. Then, open the database file you wish to protect.
6. Click the Database Tools tab.



7. click Encrypt with Password in the Database Tools section of the ribbon:
8. When the Set Database Password dialogue box appears, type the password you want to use in the Password field, then type it again in the Verify field:



9. Once a password is committed to a database file, you must enter the password before Access will open it:
10. Should you need to remove the password, click the Database tools tab again and click Remove Database Password and Encryption:



11. Then, enter the password a final time to confirm the removal of the password.

To see Section 4-10 download

**Access 2007: Part II**

**Access 2007: Part III**